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=> file reg
FILE 'REGISTRY' ENTERED AT 13:58:26 ON 12 MAY 2006
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     FILE 'REGISTRY' ENTERED AT 13:37:09 ON 12 MAY 2006
L1          1756 S (LI(L)SI(L)O(L)N)/ELS
L2          6962 S (LI(L)SI(L)O)/ELS
L3            18 S L1 (L) (NB OR TA OR W)/ELS
L4           242 S L2 (L) (NB OR TA OR W)/ELS
L5            17 S L4 (L) 4/ELC.SUB

     FILE 'HCA' ENTERED AT 13:40:26 ON 12 MAY 2006
L6            10 S L3
L7            27 S L5
L8           124 S L4

     FILE 'REGISTRY' ENTERED AT 13:40:34 ON 12 MAY 2006
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L9             1 S E3
L10          149 S (LI(L)O)/ELS (L) 2/ELC.SUB
                 E SILICA/CN
L11            1 S E3
                 E DINIOBIUM PENTOXIDE/CN
L12            2 S E3 OR E4
L13          261 S (NB(L)O)/ELS (L) 2/ELC.SUB
                 E DITANTALUM PENTOXIDE/CN
L14            1 S E3
L15          172 S (TA(L)O)/ELS (L) 2/ELC.SUB
                 E TUNGSTEN TRIOXIDE/CN
L16            5 S E3 OR E6 OR E7 OR E8 OR E9
L17          261 S (W(L)O)/ELS (L) 2/ELC.SUB

     FILE 'HCA' ENTERED AT 13:47:12 ON 12 MAY 2006
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L19       724738 S L11 OR (SILICON OR SI)(W)(OXIDE# OR DIOXIDE#) OR SIO2 O
L20        20431 S L12 OR L13 OR NB2O5
L21        19649 S L14 OR L15 OR TA2O5
L22        27436 S L16 OR L17 OR WO3
L23           22 S L8 AND L18 AND L19 AND (L20 OR L21 OR L22)
L24            0 S L6 AND L7
L25            0 S L6 AND L23
L26            1 S L7 AND L23
L27           11 S L6 OR L26
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L28          26 S L7 NOT L27
L29          21 S L23 NOT (L27 OR L28)
L30          11 S L27 AND 1840-2002/PY,PRY
L31          19 S L28 AND 1840-2002/PY,PRY
L32          20 S L29 AND 1840-2002/PY,PRY

     FILE 'REGISTRY' ENTERED AT 13:54:28 ON 12 MAY 2006
L33           0 S L3 NOT C/ELS
L34          17 S L5 NOT C/ELS

     FILE 'HCA' ENTERED AT 13:55:44 ON 12 MAY 2006
L35          27 S L34
L36          21 S L23 NOT L35
L37          20 S L35 AND 1840-2002/PY,PRY
L38          20 S L36 AND 1840-2002/PY,PRY


=> file hca
FILE 'HCA' ENTERED AT 13:58:29 ON 12 MAY 2006
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=> d 137 1-20 cbib abs hitstr hitrn

L37  ANSWER 1 OF 20  HCA  COPYRIGHT 2006 ACS on STN
140:426100  Solid electrolyte for battery.  Park, Young-sin; Lee,
     Seok-soo; Jin, Young-gu (Samsung Electronics Co., Ltd., S. Korea).
     U.S. Pat. Appl. Publ. US 2004101761 A1 20040527, 7 pp.  (English).
     CODEN: USXXCO.  APPLICATION: US 2003-656180 20030908.  PRIORITY: KR
     2002-74362 20021127.
AB   A solid electrolyte, a method of manufg. the same, and a lithium
     battery and a thin-film battery that employ the solid electrolyte
     are provided.  The solid electrolyte contains nitrogen to enhance
     the ionic cond. and electrochem. stability of batteries.
IT   691009-59-3P, Lithium niobium oxide silicate
     (Li0.32Nb0.32O0.29(SiO3)0.67) 691009-60-6P, Lithium
     niobium oxide silicate (Li1.16Nb0.58O1.77(SiO4)0.13)
     691009-62-8P, Lithium niobium oxide silicate
     (Li1.16Nb0.26O0.65(SiO4)0.29) 691009-64-0P, Lithium
     niobium oxide silicate (Li1.34Nb0.32O1.15(SiO4)0.16)
     691009-66-2P, Lithium niobium oxide silicate
     (Li1.3Nb0.1O0.3(SiO4)0.3) 691009-68-4P, Lithium niobium
     oxide silicate (Li1.4Nb0.2O0.8(SiO4)0.2) 691009-70-8P,
     Lithium niobium oxide silicate (Li1.4Nb0.1O0.45(SiO4)0.25)
```

(solid electrolyte for battery)

RN 691009-59-3 HCA
CN Lithium niobium oxide silicate (Li0.32Nb0.32O0.29(SiO3)0.67) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	0.29	17778-80-2
O3Si	0.67	15593-90-5
Nb	0.32	7440-03-1
Li	0.32	7439-93-2

RN 691009-60-6 HCA
CN Lithium niobium oxide silicate (Li1.16Nb0.58O1.77(SiO4)0.13) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	1.77	17778-80-2
O4Si	0.13	17181-37-2
Nb	0.58	7440-03-1
Li	1.16	7439-93-2

RN 691009-62-8 HCA
CN Lithium niobium oxide silicate (Li1.16Nb0.26O0.65(SiO4)0.29) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	0.65	17778-80-2
O4Si	0.29	17181-37-2
Nb	0.26	7440-03-1
Li	1.16	7439-93-2

RN 691009-64-0 HCA
CN Lithium niobium oxide silicate (Li1.34Nb0.32O1.15(SiO4)0.16) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	1.15	17778-80-2
O4Si	0.16	17181-37-2
Nb	0.32	7440-03-1
Li	1.34	7439-93-2

RN 691009-66-2 HCA
CN Lithium niobium oxide silicate (Li1.3Nb0.1O0.3(SiO4)0.3) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	0.3	17778-80-2
O4Si	0.3	17181-37-2
Nb	0.1	7440-03-1
Li	1.3	7439-93-2

RN 691009-68-4 HCA
CN Lithium niobium oxide silicate (Li1.4Nb0.2O0.8(SiO4)0.2) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	0.8	17778-80-2
O4Si	0.2	17181-37-2
Nb	0.2	7440-03-1
Li	1.4	7439-93-2

RN 691009-70-8 HCA
CN Lithium niobium oxide silicate (Li1.4Nb0.1O0.45(SiO4)0.25) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	0.45	17778-80-2
O4Si	0.25	17181-37-2
Nb	0.1	7440-03-1
Li	1.4	7439-93-2

IT **691009-59-3P**, Lithium niobium oxide silicate (Li0.32Nb0.32O0.29(SiO3)0.67) **691009-60-6P**, Lithium niobium oxide silicate (Li1.16Nb0.58O1.77(SiO4)0.13) **691009-62-8P**, Lithium niobium oxide silicate (Li1.16Nb0.26O0.65(SiO4)0.29) **691009-64-0P**, Lithium niobium oxide silicate (Li1.34Nb0.32O1.15(SiO4)0.16) **691009-66-2P**, Lithium niobium oxide silicate (Li1.3Nb0.1O0.3(SiO4)0.3) **691009-68-4P**, Lithium niobium oxide silicate (Li1.4Nb0.2O0.8(SiO4)0.2) **691009-70-8P**, Lithium niobium oxide silicate (Li1.4Nb0.1O0.45(SiO4)0.25)
(solid electrolyte for battery)

L37 ANSWER 2 OF 20 HCA COPYRIGHT 2006 ACS on STN
138:156342 Cationic conductive material for energy storage devices.
Huang, Yuhong; Wei, Qiang; Zheng, Haixing (USA). U.S. Pat. Appl. Publ. US 2003027052 A1 20030206, 8 pp. (English). CODEN: USXXCO. APPLICATION: US 2001-917503 20010727.

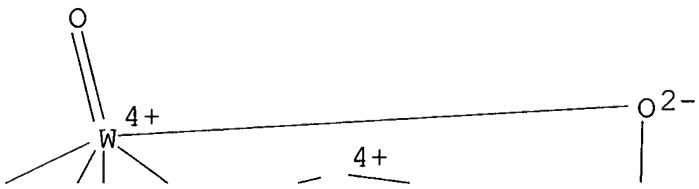
AB An electrolyte comprising a cationic species disposed in a polyoxometalate network. A compn. comprising cationic species and polyoxometalate anionic species, wherein the polyoxometalate anionic species are coupled through a network of bridge ligands. An app. comprising a 1st electrode and a 2nd electrode; a current collector coupled to one of the 1st and the 2nd electrode; and an electrolyte disposed between the 1st electrode and the 2nd electrode, the electrolyte comprising a cationic species disposed in a polyoxometalate network.

IT **84259-22-3**
(ionic cond. of)

RN 84259-22-3 HCA

CN Tungstate(4-), [.mu.12-[orthosilicato(4-)-.kappa.O:.kappa.O:.kappa.O:.kappa.O':.kappa.O':.kappa.O':.kappa.O'':.kappa.O'':.kappa.O'':.kappa.O''':.kappa.O''':.kappa.O''']]tetracosa-.mu.-oxododecaoxododeca-, tetralithium (9CI) (CA INDEX NAME)

PAGE 1-A



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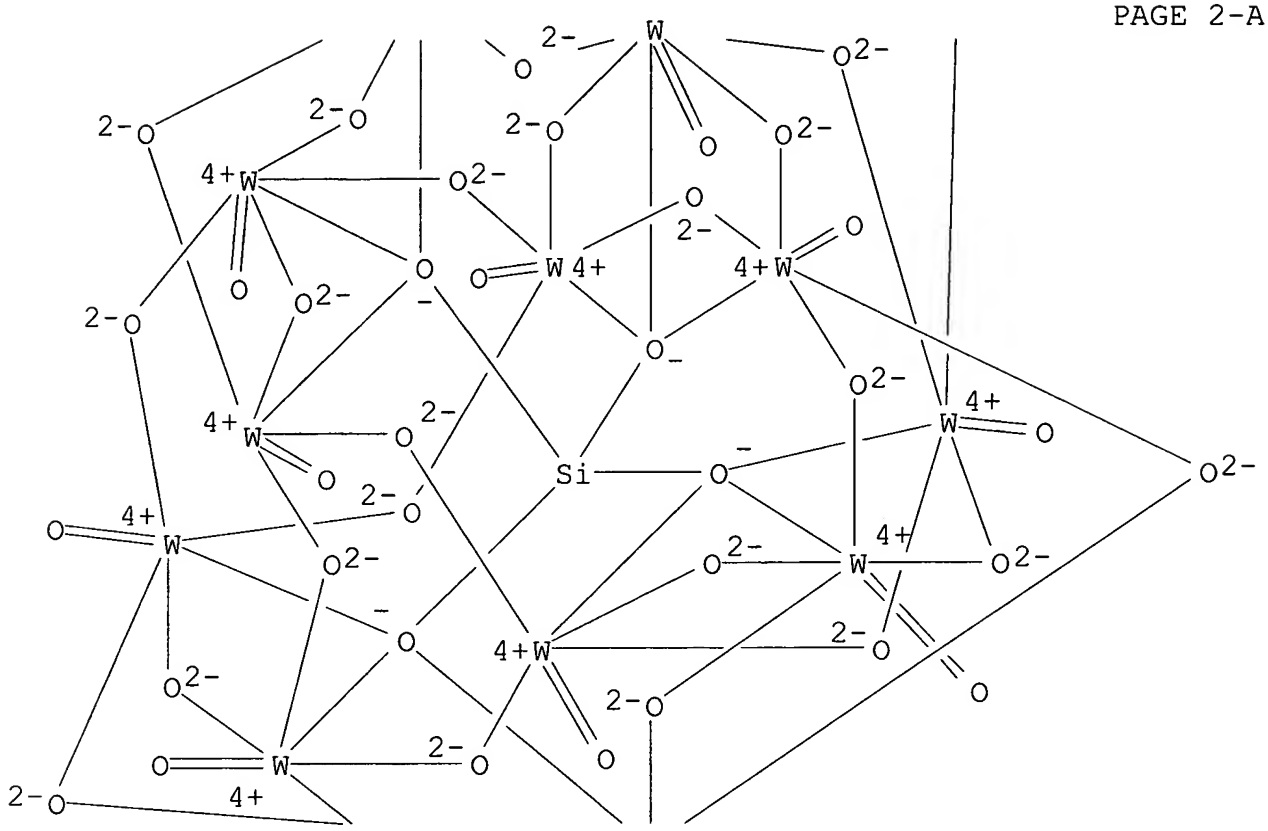

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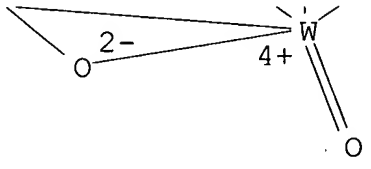

● 4 Li^+

IT **84259-22-3**
(ionic cond. of)

L37 ANSWER 3 OF 20 HCA COPYRIGHT 2006 ACS on STN
137:171395 Process for the use of and supports for the manufacture of catalysts for producing lower aliphatic carboxylic acid esters via

the addition-esterification reaction of lower aliphatic carboxylic acids with lower alkenes. Kadowaki, Etsuko; Narumi, Kousuke; Uchida, Hiroshi (Showa Denko K. K., Japan). PCT Int. Appl. WO 2002064541 A1 **20020822**, 45 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2002-JP1156 20020212. PRIORITY: JP 2001-36038 20010213; US 2001-2001/PV27334J 20010306; JP 2001-373675 20011207.

AB A siliceous support for use in a catalyst for producing a lower aliph. carboxylic acid esters (e.g., Et acetate) by the esterification-addn. reaction of a lower olefin (e.g., ethylene) with a lower aliph. carboxylic acid (e.g., acetic acid) in the gas phase is described and the support has a silicon content of 39.7-46.3% by mass or a silicon content of from 85-99% by mass in terms of silicon dioxide or a crush strength of .gtoreq.30 N; the catalyst is a heteropoly acid or salt on the support. By the use of a catalyst comprising the support, a lower aliph. carboxylic acid ester is produced from a lower olefin and a lower aliph. carboxylic acid without causing a great redn. of catalytic activity or cracking or abrasion of the catalyst.

IT **84259-22-3D**, Lithium tungstosilicate (Li4SiW12O40), solid soln. with tungstosilicic acid
(catalysts with siliceous supports for the manuf. of catalysts for producing lower aliph. carboxylic acid esters via the addn.-esterification reaction of lower aliph. carboxylic acids with lower alkenes)

RN 84259-22-3 HCA

CN Tungstate(4-), [.mu.12-[orthosilicato(4-)-.kappa.O:.kappa.O:.kappa.O:.kappa.O':.kappa.O':.kappa.O':.kappa.O'':.kappa.O'':.kappa.O'':.kappa.O''':.kappa.O''':.kappa.O''']]tetracosa-.mu.-oxododecaoxododeca-, tetralithium (9CI) (CA INDEX NAME)

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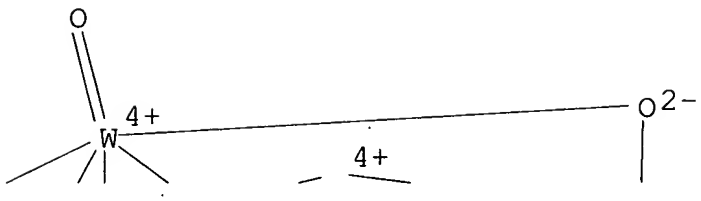

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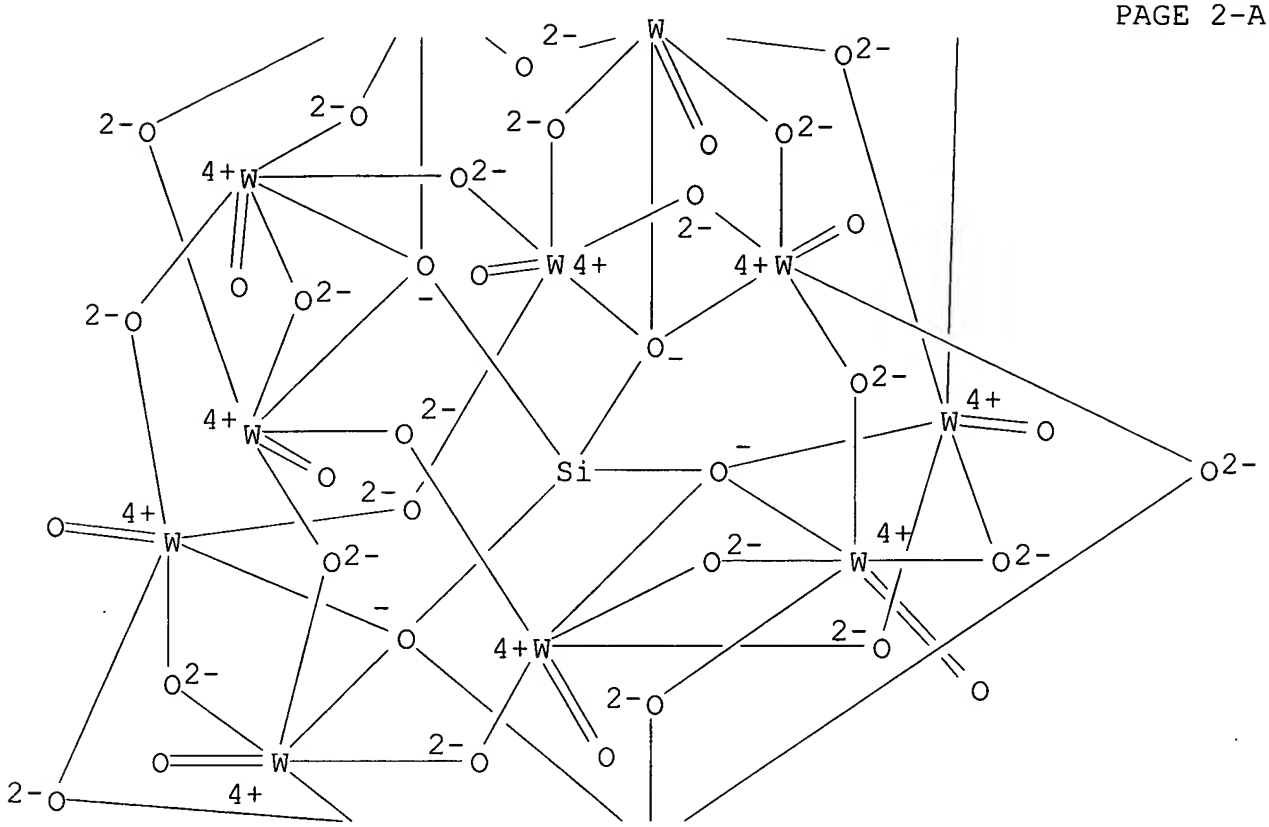

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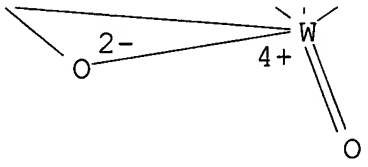

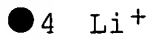

IT **84259-22-3D**, Lithium tungstosilicate (Li4SiW12O40), solid soln. with tungstosilicic acid
(catalysts with siliceous supports for the manuf. of catalysts for producing lower aliph. carboxylic acid esters via the addn.-esterification reaction of lower aliph. carboxylic acids with lower alkenes)

L37 ANSWER 4 OF 20 HCA COPYRIGHT 2006 ACS on STN
136:40116 Solid electrolyte for thin film energy storage devices.
Huang, Yuhong; Jiang, Gengwei; West, William; Hill, Craig (Chemat Technology, Inc., Northridge, CA, 91324, USA). Proceedings of the Intersociety Energy Conversion Engineering Conference, 36th(Vol. 2), 887-889 (English) **2001**. CODEN: PIECDE. ISSN: 0146-955X. Publisher: Society of Automotive Engineers.

AB There is a need for the development of solid-state micro power sources with both high power and high energy d. as a new type of power supply for advanced consumer electronics, MEMS, sensors, computer equipment and communication systems. To satisfy the requirements of a compact and lightwt. power supply, thin film batteries are under consideration as candidates for the hybrid power sources. A novel solid electrolyte based on polyoxometalates has been studied for thin film energy storage devices. This class of nano-cluster materials show considerable potential in both proton and lithium ion solid electrolyte conductive coatings. A spin-on thin film deposition process was developed in this research.

IT **84259-22-3**, Lithium tungstosilicate li4siw12o40
(solid electrolyte for thin film energy storage devices)

RN 84259-22-3 HCA

CN Tungstate(4-), [.mu.12-[orthosilicato(4-)-.kappa.O:.kappa.O:.kappa.O:.kappa.O':.kappa.O':.kappa.O':.kappa.O'':.kappa.O'':.kappa.O'':.kappa.O''':.kappa.O''':.kappa.O''']]tetracosa-.mu.-oxododecaoxododeca-, tetralithium (9CI) (CA INDEX NAME)

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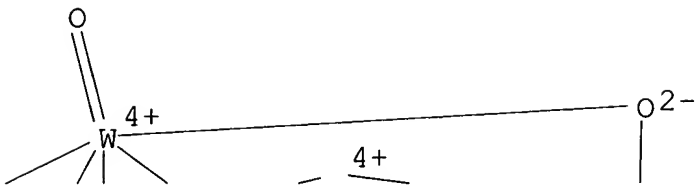

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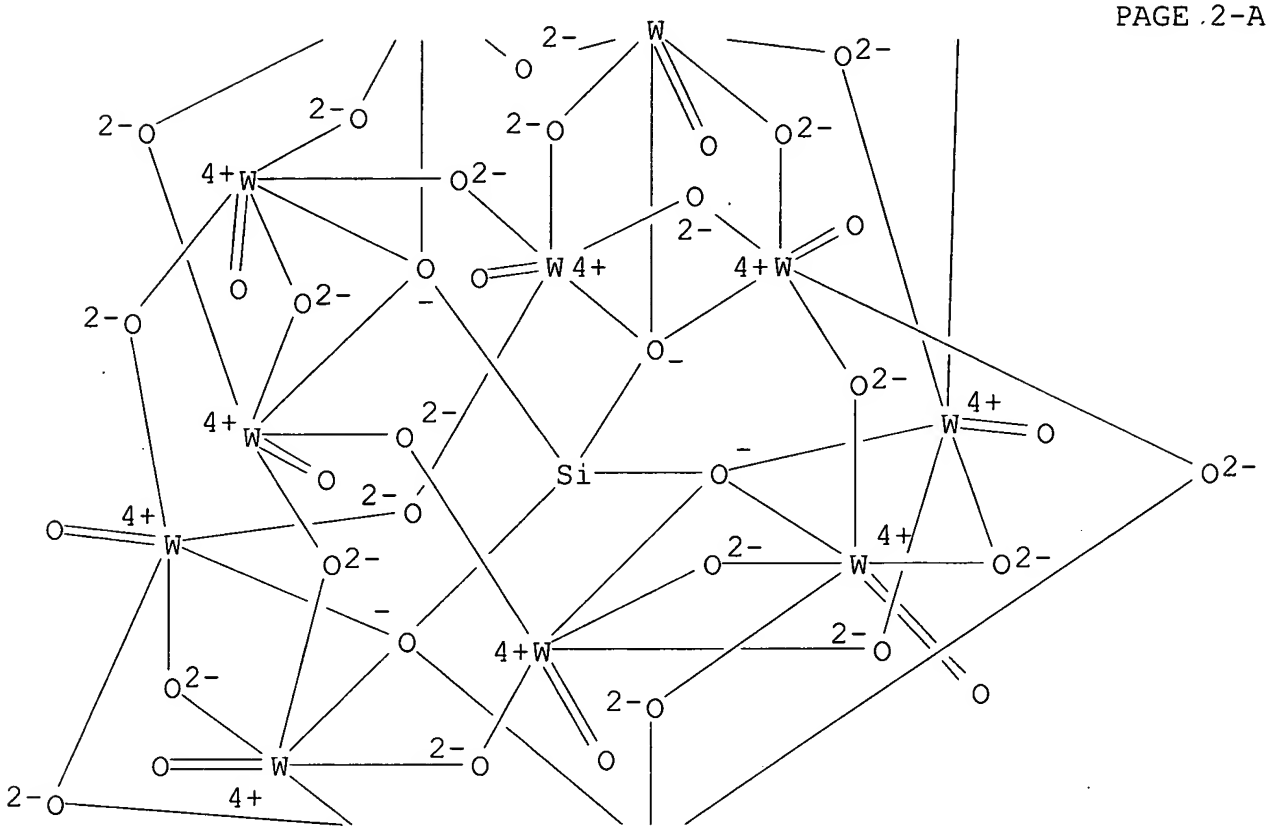

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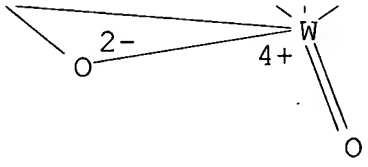

● 4 Li^+

IT **84259-22-3**, Lithium tungstosilicate li4siw12o40
(solid electrolyte for thin film energy storage devices)

L37 ANSWER 5 OF 20 HCA COPYRIGHT 2006 ACS on STN
133:34876 Catalytic condensation of formaldehyde and methyl formate over 12-tungstosilicic compounds. Huang, W.-g.; He, D.-h.; Liu, J.-y.;

Zhu, Q.-m. (Department of Chemistry, State Key Laboratory of C1 Chemical Technology, Tsinghua University, Beijing, Peop. Rep. China). Applied Catalysis, A: General, 199(1), 93-98 (English) **2000**. CODEN: ACAGE4. ISSN: 0926-860X. Publisher: Elsevier Science B.V..

AB Condensation of formaldehyde and Me formate to Me glycolate and Me methoxy acetate catalyzed by 12-tungstosilicic compds. has been studied. Thermal pre-treatment of 12-tungstosilicic acid has a great influence on the activity of the acid. The most preferable pre-treatment temp. is 300.degree.C in the range of 100-350.degree.C. Water has a disadvantageous effect on the condensation reaction. 12-tungstosilicic acid and its acidic salts show high activity to the reaction, but the neutral salts have little activity. The influence of acid strength has also been investigated.

IT **84259-22-3**
(catalytic condensation of formaldehyde and Me formate over 12-tungstosilicic compds.)

RN 84259-22-3 HCA

CN Tungstate(4-), [.mu.12-[orthosilicato(4-)-.kappa.O:.kappa.O:.kappa.O:.kappa.O':.kappa.O':.kappa.O':.kappa.O'':.kappa.O'':.kappa.O'':.kappa.O''':.kappa.O''':.kappa.O''']]tetracosa-.mu.-oxododecaoxododeca-, tetralithium (9CI) (CA INDEX NAME)

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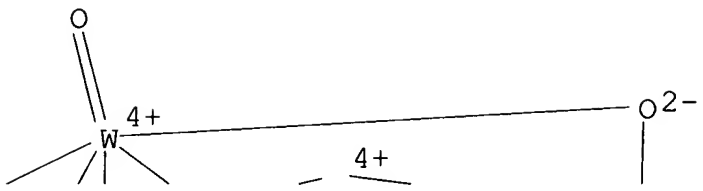

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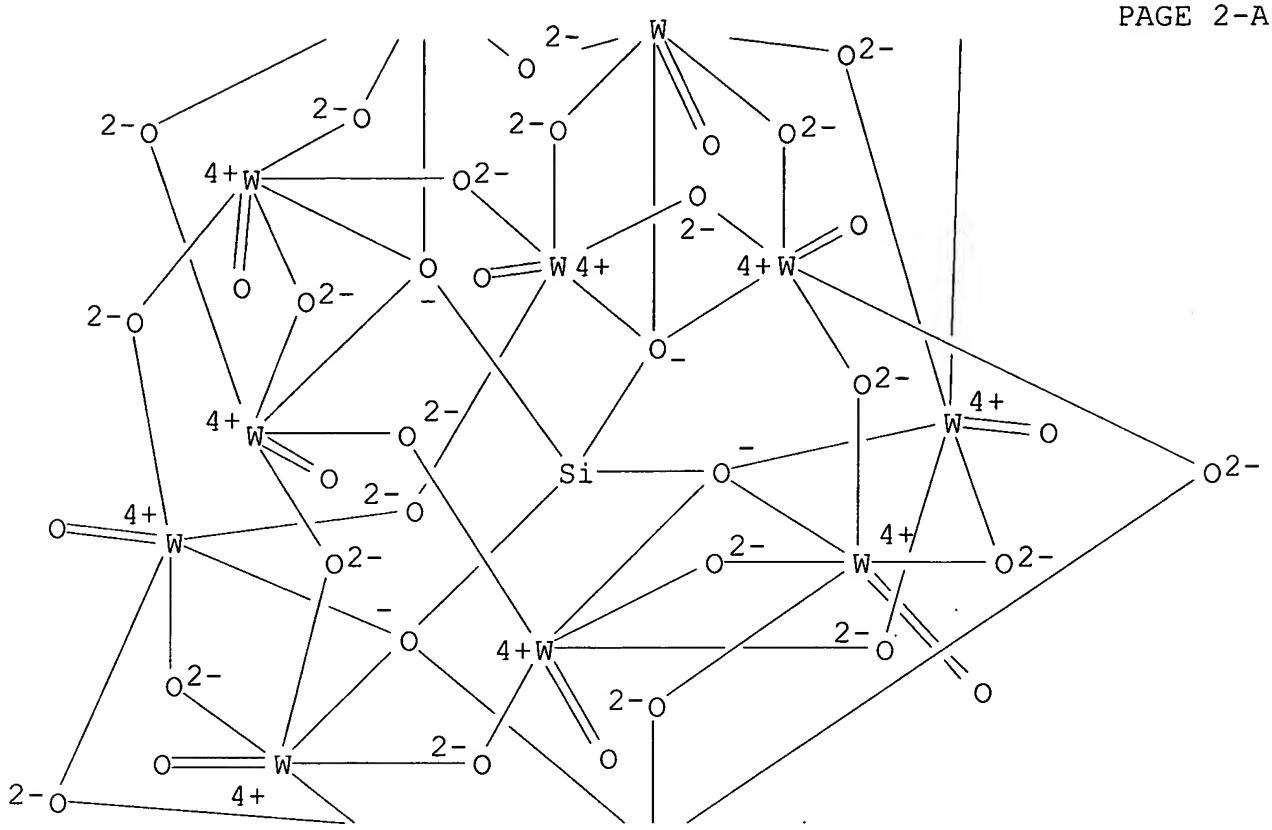

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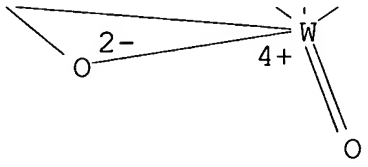


● 4 Li^+

IT **84259-22-3**
(catalytic condensation of formaldehyde and Me formate over 12-tungstosilicic compds.)

L37 ANSWER 6 OF 20 HCA COPYRIGHT 2006 ACS on STN
126:9591 Aggregation in precipitation reactions: stability of primary

particles. Zukoski, C. F.; Rosenbaum, D. F.; Zamora, P. C. (Dep. Chemical Engineering & Beckman Institute Advanced Studies, Univ. Illinois, Urbana, USA). Chemical Engineering Research and Design, 74(A7), 723-731 (English) **1996**. CODEN: CERDEE. ISSN: 0263-8762. Publisher: Institution of Chemical Engineers.

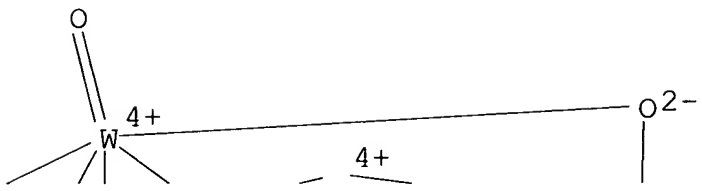
AB In many pptn. reactions, small primary particles (1-5 nm) are produced. The aggregation of these primary particles plays a significant role in detg. final particle size distributions. Greater understanding of factors which control the strength of attraction between particles of this size would aid control of particle morphol. as well as the range of particle sizes produced. In sep. pptn. technologies, the object is often to produce high quality of crystals of large globular mols. (e.g., proteins). Soly. of these particles is controlled by pair interaction potentials. In both of these examples, aggregation and assocn. of particles with 1-5 nm sizes are significant events. Unfortunately, little is known about how to control these processes. In this paper, methods are described of characterizing the interactions of particles in this nano size region. Working with silicotungstate (SiW12O40) and lysozyme, it is concluded that short range interactions of solvation of structural origin play a significant role in pair potentials and thus the particle's state of aggregation. The implications of these observations are discussed in terms of the aggregation of primary particles produced in pptn. reactions and the soly. of globular macromols. where it is concluded that short range forces can increase or decrease the extent of the pptn.

IT **84259-22-3**
(aggregation in pptn. reactions of nanometer-size primary particles)

RN 84259-22-3 HCA

CN Tungstate(4-), [.mu.12-[orthosilicato(4-)-.kappa.O:.kappa.O:.kappa.O:.kappa.O':.kappa.O':.kappa.O':.kappa.O'':.kappa.O'':.kappa.O'':.kappa.O''':.kappa.O''':.kappa.O''']]tetracosa-.mu.-oxododecaoxododeca-, tetralithium (9CI) (CA INDEX NAME)

PAGE 1-A



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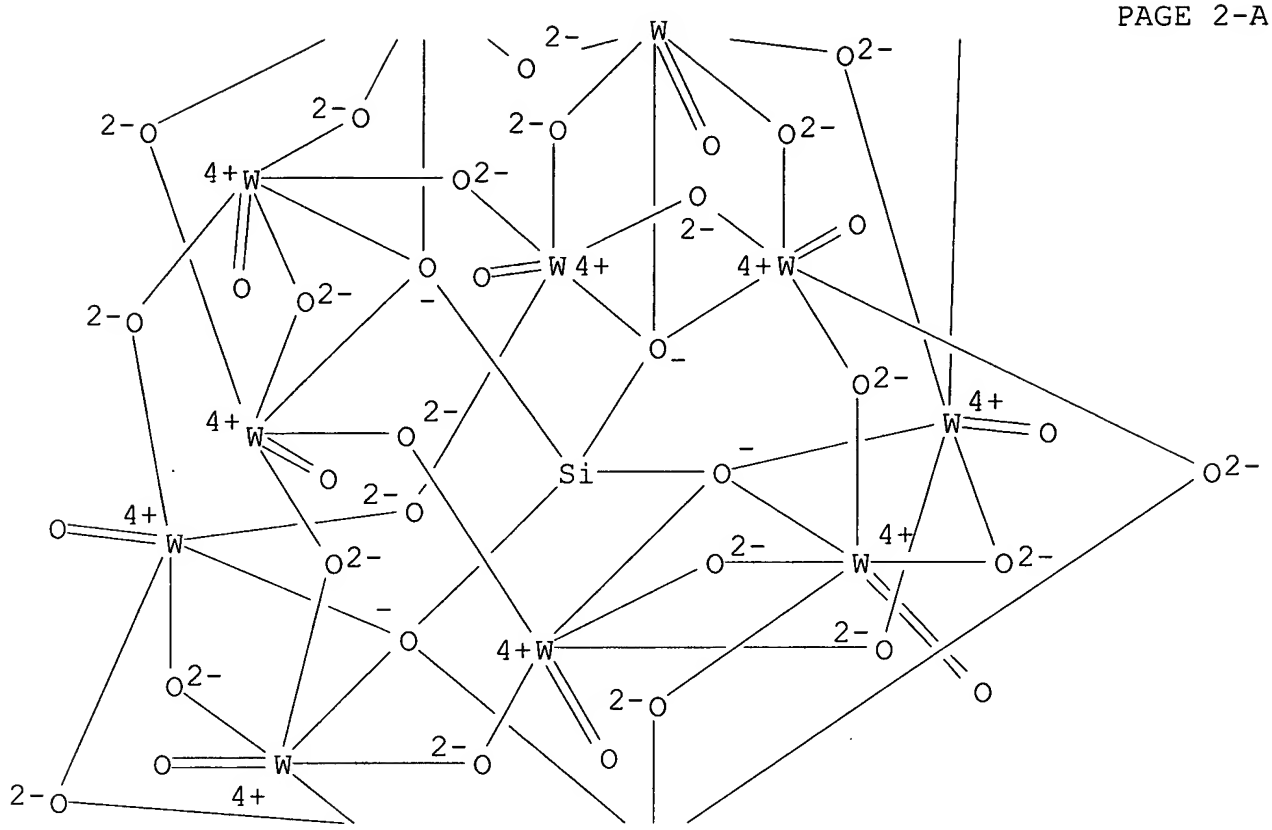

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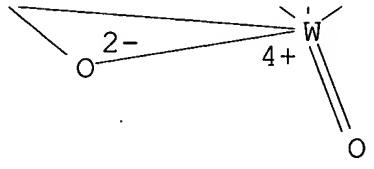


● 4 Li^+

IT **84259-22-3**
(aggregation in pptn. reactions of nanometer-size primary particles)

L37 ANSWER 7 OF 20 HCA COPYRIGHT 2006 ACS on STN
122:164054 Process for producing acetic acid. Suzuki, Toshiro;

Yoshikawa, Hiroko; Abe, Kenichi; Sano, Kenichi (Showa Denko K. K., Japan). Eur. Pat. Appl. EP 620205 A1 **19941019**, 15 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, PT, SE. (English). CODEN: EPXXDW. APPLICATION: EP 1994-105329 19940406. PRIORITY: JP 1993-79730 19930406; JP 1993-140910 19930611.

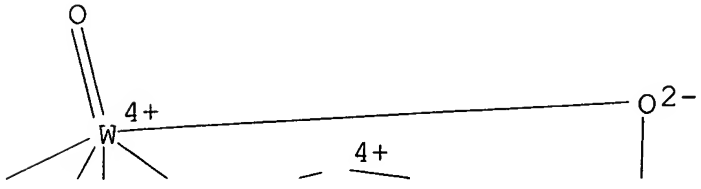
AB The process comprises reacting ethylene and oxygen in the presence of a catalyst comprising metallic Pd and .gtoreq.1 member selected from heteropoly-acids (e.g., phostotungstic acid, silicotungstic acid) and their salts, or in the presence of a catalyst comprising metallic Pd, .gtoreq.1 member selected from heteropoly-acids and their salts and .gtoreq.1 member selected from metallic elements of Groups 11, 14, 15 and 16 of the Long-Form Periodic Table.

IT **84259-22-3**
(process for producing acetic acid)

RN 84259-22-3 HCA

CN Tungstate(4-), [.mu.12-[orthosilicato(4-)-.kappa.O:.kappa.O:.kappa.O:.kappa.O':.kappa.O':.kappa.O':.kappa.O'':.kappa.O'':.kappa.O'':.kappa.O''':.kappa.O''':.kappa.O''']]tetracosa-.mu.-oxododecaoxododeca-, tetralithium (9CI) (CA INDEX NAME)

PAGE 1-A



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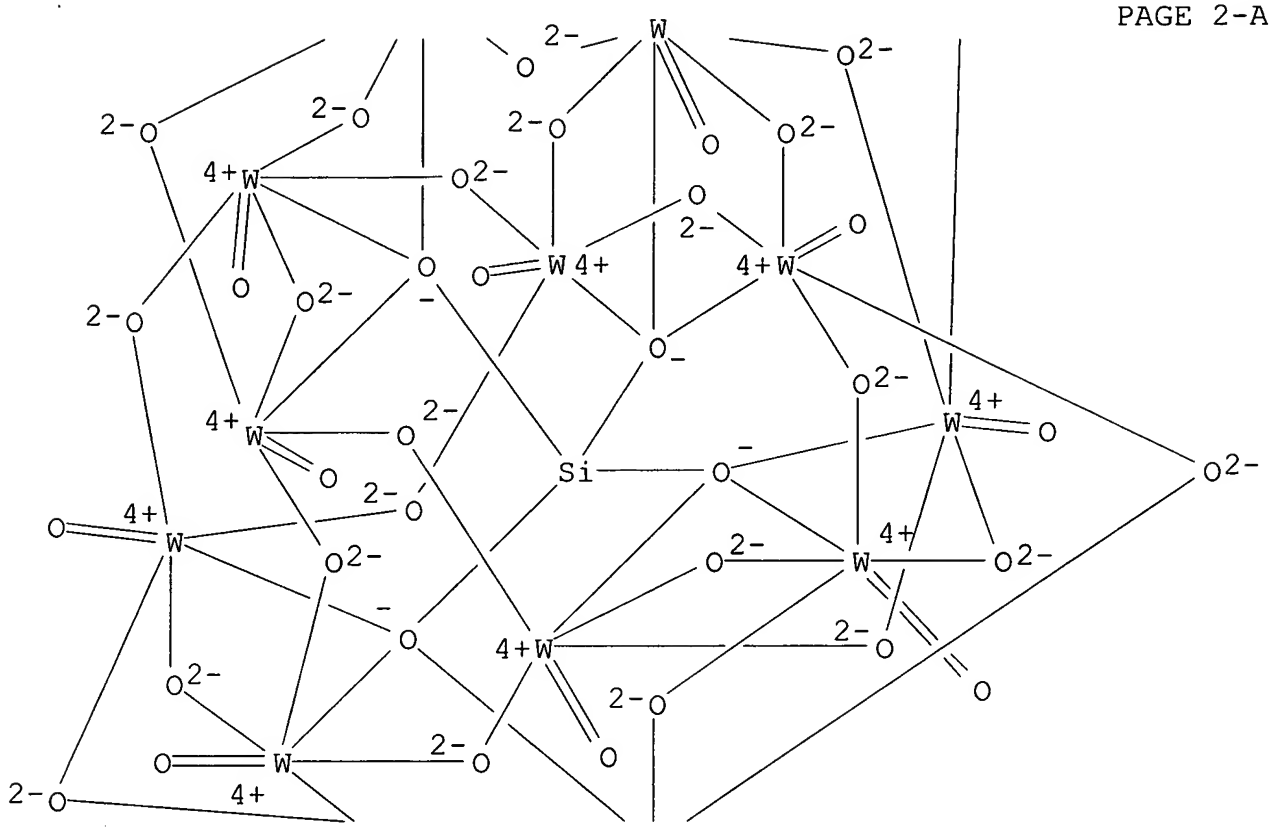

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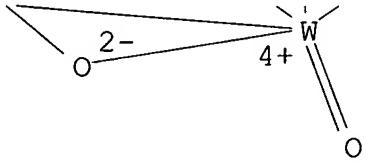


● 4 Li^+

IT **84259-22-3**
(process for producing acetic acid)

L37 ANSWER 8 OF 20 HCA COPYRIGHT 2006 ACS on STN

121:259663 Secondary nonaqueous-electrolyte battery and its manufacture. Iwasaki, Fumiharu; Yahagi, Seiji; Sakata, Akifumi; Chinone, Kazuo; Ishikawa, Hideki; Sakai, Tsugio; Tahara, Kensuke (Seiko Instruments Inc., Japan; Seiko Electronic Components Ltd.). Eur. Pat. Appl. EP 615296 A1 **19940914**, 22 pp. DESIGNATED STATES: R: DE, FR, GB. (English). CODEN: EPXXDW. APPLICATION: EP 1994-301699 19940310. PRIORITY: JP 1993-49716 19930310; JP 1993-80944 19930407; JP 1993-83682 19930409; JP 1993-328379 19931224; JP 1994-6023 19940124.

AB The battery comprises .gtoreq.1 anode, a cathode, and a nonaq. electrolyte with Li ion cond., wherein a composite oxide LixSi1-yMyOz is used as an active material of the anode, where M represents .gtoreq.1 oxide-forming element other than alkali metals and Si (e.g., Ti, W, Mn, Fe, Ni, B, Sn, or Pb) 0 <x, 0 <y <1, and 0 <z <2. The battery has an enhanced high current charge and discharge characteristic with a high voltage and high energy d. but with less deterioration due to overcharge and overdischarge, and also has a long service life.

IT **158710-01-1**, Lithium silicon tungsten oxide (Li0-1Si0.9W0.1O1.1)
(anodes for lithium nonaq.-electrolyte batteries)

RN 158710-01-1 HCA

CN Lithium silicon tungsten oxide (Li0-1Si0.9W0.1O1.1) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	1.1	17778-80-2
W	0.1	7440-33-7
Si	0.9	7440-21-3
Li	0 - 1	7439-93-2

IT **158710-01-1**, Lithium silicon tungsten oxide (Li0-1Si0.9W0.1O1.1)
(anodes for lithium nonaq.-electrolyte batteries)

L37 ANSWER 9 OF 20 HCA COPYRIGHT 2006 ACS on STN

119:261517 Crystal structures of the sphene sodium antimony germanate (NaSbGeO5) sodium tantalum germanate (NaTaGeO5) and lithium tantalum silicate (LiTaSiO5). Genkina, E. A.; Mill, B. V. (Inst. Kristallogr., Russia). Kristallografiya, 37(6), 1424-8 (Russian) **1992**. CODEN: KRISAJ. ISSN: 0023-4761.

AB Single crystals of NaSbGeO5 (I) LiTaSiO5 (II) and NaTaGeO5 (III) were grown from melts. I is monoclinic, space group C 1/c, a 6.712(1), b 8.881(2), c 7.211(2) .ANG., .beta. 114.65(2); d. = 5.053 g cm-3, Z = 4. II is monoclinic, space group P2, 1c, a 7.396(1), b 7.930(1), c 7.444(1), .beta. 119.18(2).degree., d. = 5.126 g cm-3, Z

= 4. At. coordinates and interat. distances were obtained for I, II and III. These 3 oxides are isostructural.

IT **128966-81-4**, Lithium tantalum silicate (LiTaSiO5)
(crystal structure of)

RN 128966-81-4 HCA

CN Lithium tantalum oxide silicate (LiTaO(SiO4)) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	1	17778-80-2
O4Si	1	17181-37-2
Ta	1	7440-25-7
Li	1	7439-93-2

IT **128966-81-4**, Lithium tantalum silicate (LiTaSiO5)
(crystal structure of)

L37 ANSWER 10 OF 20 HCA COPYRIGHT 2006 ACS on STN

119:193140 Pyroelectric properties of various lithium tantalate related ceramics. In, Hyun Bin; von der Muehll, Regnault; Ye, Zuo Guang; Ravez, Jean (Lab. Chim. Solide, CNRS, Talence, 33405, Fr.). IEEE Int. Symp. Appl. Ferroelectr., 7th, Meeting Date 1990, 367-9. IEEE: New York, N. Y. (English) **1991**. CODEN: 58USA3.

AB Structure and pyroelec. and phase transitions were studied in pyroelec. ceramics of binary systems of LiTaO3 with Li2O, LiMgF3, Li2SiO3, and CaZrO3.

IT **150536-66-6**, Lithium tantalum oxide silicate (Li1.1Ta0.9O2.6(SiO4)0.1)
(pyroelec. and structure of)

RN 150536-66-6 HCA

CN Lithium tantalum oxide silicate (Li1.1Ta0.9O2.6(SiO4)0.1) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	2.6	17778-80-2
O4Si	0.1	17181-37-2
Ta	0.9	7440-25-7
Li	1.1	7439-93-2

IT **150536-66-6**, Lithium tantalum oxide silicate (Li1.1Ta0.9O2.6(SiO4)0.1)
(pyroelec. and structure of)

L37 ANSWER 11 OF 20 HCA COPYRIGHT 2006 ACS on STN

113:107933 Synthesis and crystal structure of A+M5+GeO5 (A = Li, Na; M =

Nb, Ta, Sb) and lithium tantalum silicate (LiTaSiO5). Mill, B. V.; Belokoneva, E. L.; Butashin, A. V. (Mosk. Gos. Univ., Moscow, USSR). Kristallografiya, 35(2), 316-23 (Russian) **1990**. CODEN: KRISAJ. ISSN: 0023-4761.

AB AMGeO5 (A = Li, Na; M = Nb, Ta, Sb) and LiTaSiO5 were prepd. by heating mixts. contg. A2CO3, Nb2O5 or Ta2O5 or Sb2O3, and GeO2, or Li2CO3, Ta2O5, and SiO2 at 900-1400.degree. for 5-10 h. NaTaGeO5, LiTaGeO5, and NaNbGeO5 single crystals were grown. The compds except LiNbGeO5 have the monoclinic sphere structure; lattice parameters are given.

IT **128966-81-4P**, Lithium tantalum oxide silicate (LiTaO(SiO4)) (prepn. and crystal structure of)

RN 128966-81-4 HCA

CN Lithium tantalum oxide silicate (LiTaO(SiO4)) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	1	17778-80-2
O4Si	1	17181-37-2
Ta	1	7440-25-7
Li	1	7439-93-2

IT **128966-81-4P**, Lithium tantalum oxide silicate (LiTaO(SiO4)) (prepn. and crystal structure of)

L37 ANSWER 12 OF 20 HCA COPYRIGHT 2006 ACS on STN

112:67519 The structure and electrical properties of solid lithium electrolytes in the systems Li4ZO4-Li2Z'O4 (Z = silicon, germanium). Burmakin, E. I. (Inst. Electrochem., Sverdlovsk, 620066, USSR). Solid State Ionics, 36(3-4), 155-7 (English) **1989**. CODEN: SSIOD3. ISSN: 0167-2738.

AB In the systems based on Li4SiO4 and Li4GeO4 with Li2Z'O4 additives (Z' = S, Cr, Se, Mo, W), the solid Li electrolytes of 2 principally different structural types are formed: Li4ZO4-type and .gamma.-Li3PO4 type. The 2nd type has the higher conductivities, >10-1 Sm cm-1 at 300.degree..

IT **124964-22-3**, Lithium tungsten oxide silicate (Li3.4-4W0-0.3O0-1.2(SiO4)0.7-1) (crystal structure and elec. cond. of)

RN 124964-22-3 HCA

CN Lithium tungsten oxide silicate (Li3.4-4W0-0.3O0-1.2(SiO4)0.7-1) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	0 - 1.2	17778-80-2

O4Si	0.7 - 1	17181-37-2
W	0 - 0.3	7440-33-7
Li	3.4 - 4	7439-93-2

IT **124964-22-3**, Lithium tungsten oxide silicate (Li3.4-4W0-0.3O0-1.2(SiO4)0.7-1)
(crystal structure and elec. cond. of)

L37 ANSWER 13 OF 20 HCA COPYRIGHT 2006 ACS on STN
105:97066 Heteropoly anion-assisted rhodium catalysis revealed in the homogeneous selective hydrogenation. Urabe, Kazuo; Tanaka, Yoshiyuki; Izumi, Yusuke (Fac. Eng., Nagoya Univ., Nagoya, 464, Japan). Chemistry Letters (10), 1595-6 (English) **1985**. CODEN: CMLTAG. ISSN: 0366-7022. OTHER SOURCES: CASREACT 105:97066.

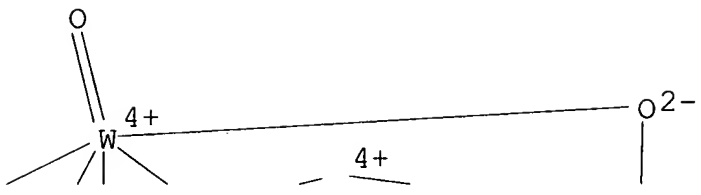
AB When coupled with Li4SiW12O40 or Li4SiMo12O40, RhCl(PPh3)3 became very active and selective for the semihydrogenation of PhC.tplbond.CMe to PhCH:CHMe and exhibited sharp substrate selectivity in the hydrogenation of substituted alkenes.

IT **84259-22-3**
(catalysts contg. chlorobis(triphenylphosphine)rhorium and, for hydrogenation)

RN 84259-22-3 HCA

CN Tungstate(4-), [.mu.12-[orthosilicato(4-)-.kappa.O:.kappa.O:.kappa.O:.kappa.O':.kappa.O':.kappa.O':.kappa.O'':.kappa.O'':.kappa.O'':.kappa.O''':.kappa.O''':.kappa.O''']]tetracosa-.mu.-oxododecaoxododeca-, tetralithium (9CI) (CA INDEX NAME)

PAGE 1-A



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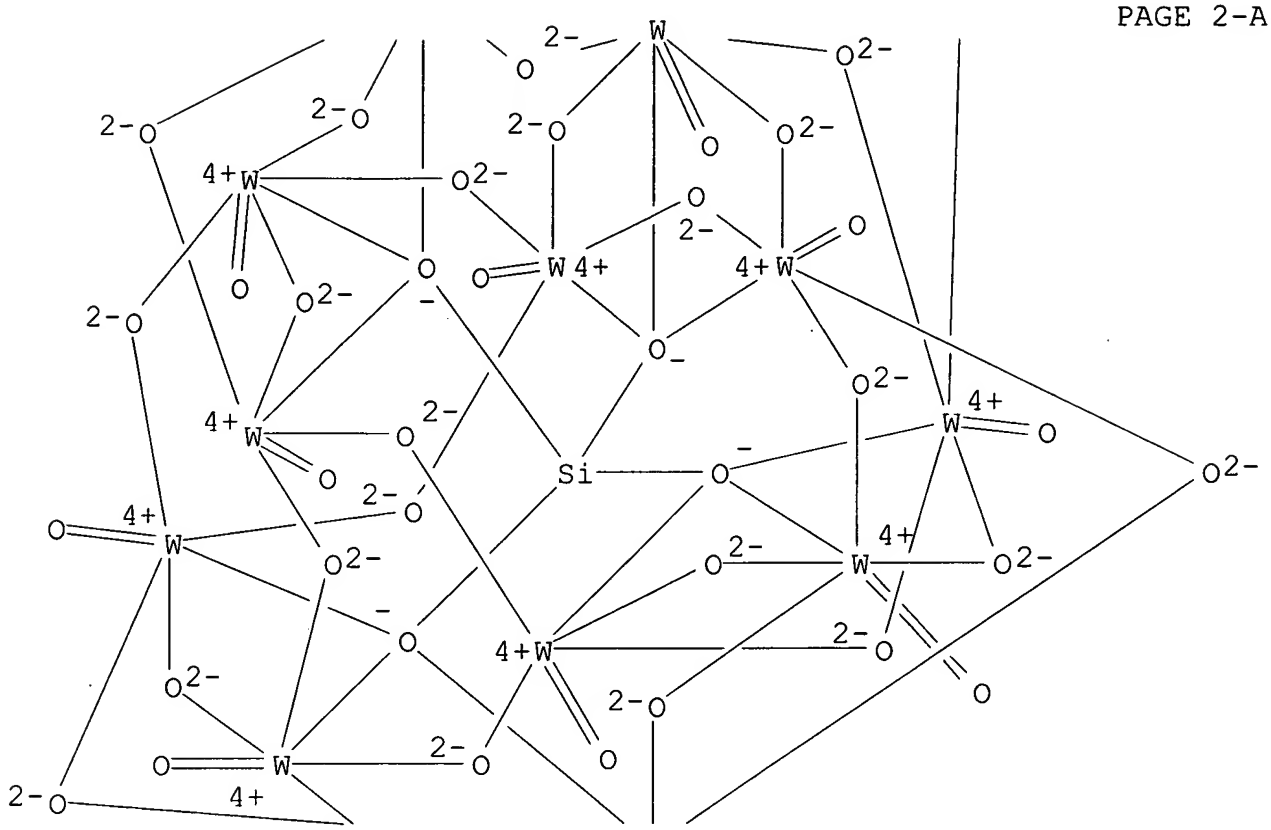

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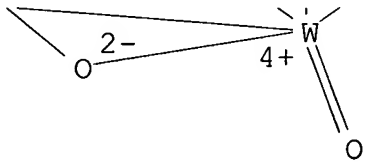


● 4 Li^+

IT **84259-22-3**
(catalysts contg. chlorobis(triphenylphosphine)rhorium and, for hydrogenation)

L37 ANSWER 14 OF 20 HCA COPYRIGHT 2006 ACS on STN
105:17023 Disubstituted tungstosilicates. 1. Synthesis, stability, and

structure of the lacunary precursor polyanion of a tungstosilicate .gamma.-SiW10O368-. Canny, Jacqueline; Teze, Andre; Thouvenot, Rene; Herve, Gilbert (Lab. Physicochim. Inorg., Univ. Pierre et Marie Curie, Paris, 75230, Fr.). Inorganic Chemistry, 25(13), 2114-19 (English) **1986**. CODEN: INOCAJ. ISSN: 0020-1669.

AB The polyanion SiW10O368- was obtained from .beta.-SiW11O398- at pH 9.1 and isolated as K+ and Rb+ salts. The structure of Rb8SiW10O36.10H2O (monoclinic, P21/c; a 12.426(3), b 19.319(6), c 19.743(5) .ANG., .beta. 96.33(3).degree.; Z = 4) was detd. and refined to final indexes R and Rw of 0.070 and 0.073, resp. The polyanion is a .gamma. isomer, and the 183W NMR spectra of aq. solns. agree with the solid-state structure. They present 1 exceptionally weak 2JW-W coupling (4.9 Hz) between corner-sharing W atoms. The polyanion gives 1:1 complexes with alkali and alk.-earth cations, and its stability in soln. is strongly dependent on the formation of these complexes.

IT **102073-51-8**
(equil. const. of, with hydrogen ion)

RN 102073-51-8 HCA

CN Tungstate(8-), [.mu.10-[orthosilicato(4-)-O:O:O:O':O':O':O'':O'':O''':O''']]octadeca-.mu.-oxotetradecaoxodeca-, monolithium (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT **102073-51-8**
(equil. const. of, with hydrogen ion)

L37 ANSWER 15 OF 20 HCA COPYRIGHT 2006 ACS on STN

100:5848 Tertiary ethers. (Asahi Chemical Industry Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 58074630 A2 **19830506** Showa, 7 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1981-173747 19811030.

AB Tertiary ethers were prepd. by reaction of RCH:CR1R2 (R = H, alkyl; R1, R2 = alkyl) with primary or secondary alcs. over heteropoly acid salts contg. central elements of P, Si, B, Ge, As, Se, Ti, Zr, Mn, F, U, Ce, and Th, ligand elements of MO and/or W, and cations of Group IA, IIA, VIII, IIIA, IVA, and IIB elements. Thus, 100 g Na tungstophosphate (I) was calcined 3 h at 300.degree., cooled, contacted with MeOH vapor, and concd. in vacuo to give 1:10 I-MeOH adduct, over which was passed a mixt. of MeOH 2.8 g, Me2C:CH2 5.0, 1-butene 50, and n-C4H10 45 g at 60.degree. and 12 kg/cm2 gage for 3 h to give 97.2% Me3COMe with 100% selectivity, vs. 1.3% yield with 0.0001 g I as catalyst. Similarly prepd. were Me2C(OMe)Et and Me3COR (R = Et, Pr, Me2CH, Bu).

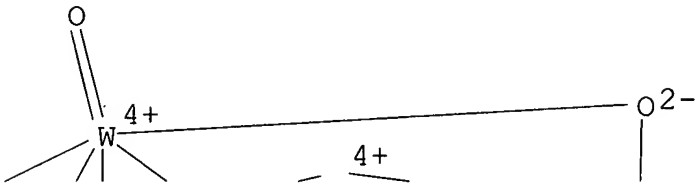
IT **84259-22-3**
(catalysts, for addn. of tertiary olefins with alcs.)

RN 84259-22-3 HCA

CN Tungstate(4-), [.mu.12-[orthosilicato(4-)-.kappa.O:.kappa.O:.kappa.O:.kappa.O':.kappa.O':.kappa.O':.kappa.O'':

.kappa.O'':.kappa.O'':.kappa.O''':.kappa.O''':.kappa.O''']]tetracosa-
.mu.-oxododecaoxododeca-, tetralithium (9CI) (CA INDEX NAME)

PAGE 1-A



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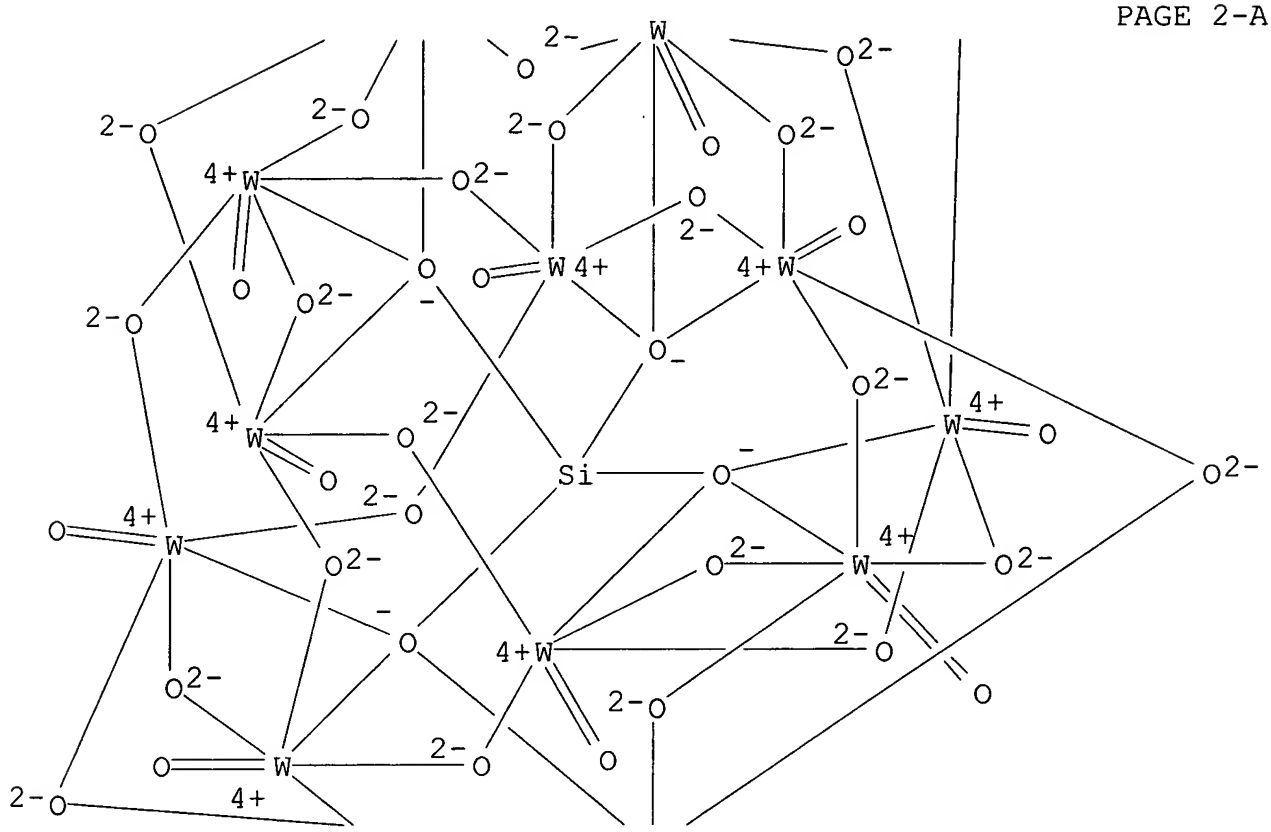

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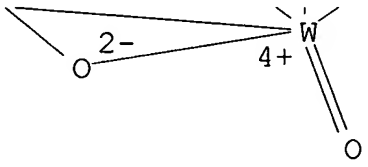


● 4 Li^+

IT **84259-22-3**
(catalysts, for addn. of tertiary olefins with alcs.)

L37 ANSWER 16 OF 20 HCA COPYRIGHT 2006 ACS on STN
99:81558 Thermal stability and products of the decomposition of lithium and sodium silicotungstates ($Li_4SiW_{12}O_{40}.26H_2O$ and

Na4SiW12O40.17H2O). Varfolomeev, M. B.; Lunk, Hans Joachim; Hilmer, W. (Mosk. Inst. Tonkoi Khim. Tekhnol., Moscow, USSR). Zhurnal Neorganicheskoi Khimii, 28(5), 1192-6 (Russian) **1983**.
CODEN: ZNOKAQ. ISSN: 0044-457X.

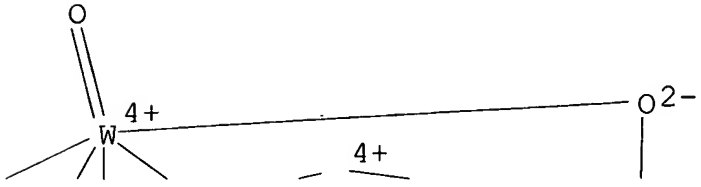
AB The thermal decompn. of Li4SiW12O40.26H2O (I) and Na4SiW12O40.17H2O (II) was studied by high-temp. x-ray diffraction, thermal anal., and IR spectra. Dehydration of I led to the formation of the nonahydrate, pentahydrate, and anhyd. salt. Dehydration of II led to the formation of the heptahydrate, tetrahydrate, and anhyd. salt. Li4SiW12O40 and Na4SiW12O40 began to decomp. at .apprx.540 and 600.degree., resp. The decompn. products of Li4SiW12O40 at 700.degree. were a mixt. of tetragonal WO3 and Li2W5O16. Those of Na4SiW12O40 at 700.degree. were Na2W4O13 and Na2W6O19.

IT **84259-22-3P**
(formation of, from thermal decompn. of hexacosahydrate)

RN 84259-22-3 HCA

CN Tungstate(4-), [.mu.12-[orthosilicato(4-)-
.kappa.O:.kappa.O:.kappa.O:.kappa.O':.kappa.O':.kappa.O':.kappa.O'':
.kappa.O'':.kappa.O'':.kappa.O''':.kappa.O''':.kappa.O''']]tetracosa-
.mu.-oxododecaoxododeca-, tetralithium (9CI) (CA INDEX NAME)

PAGE 1-A



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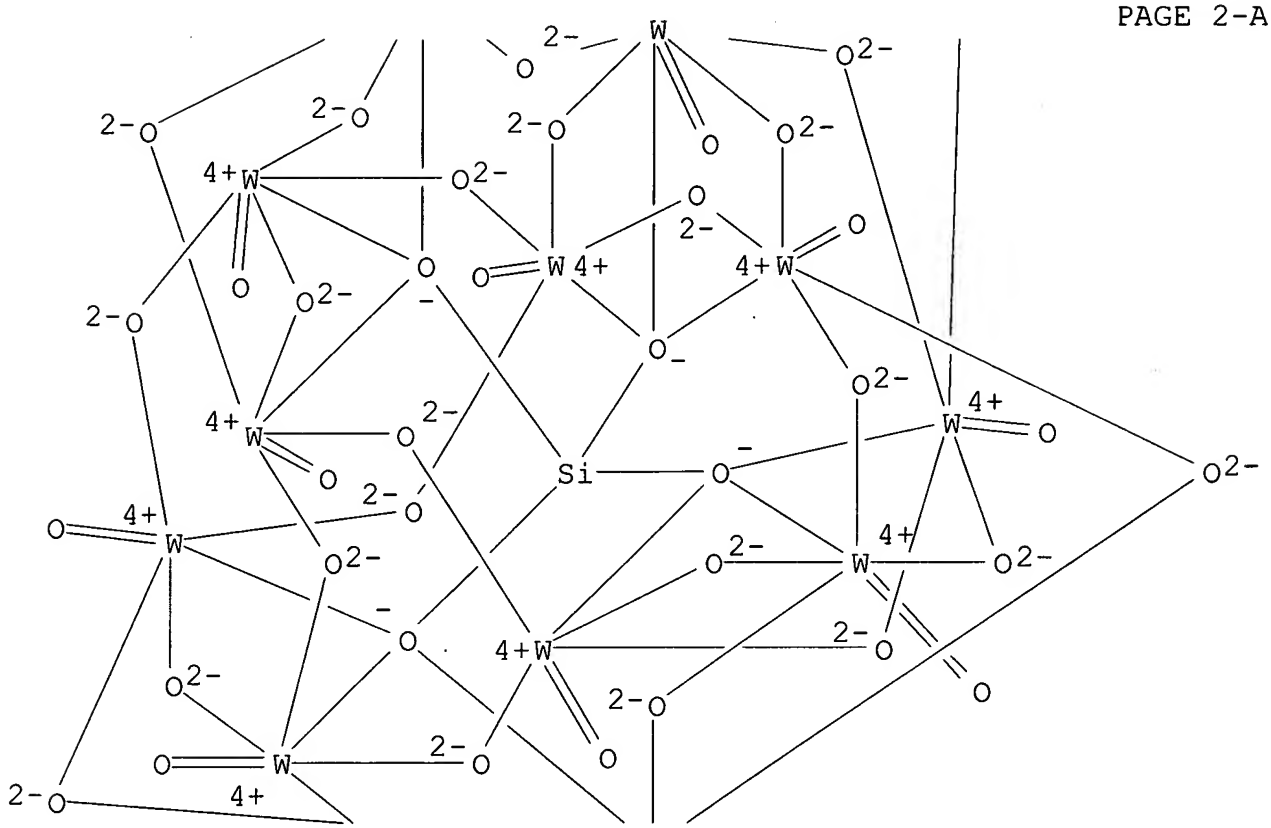

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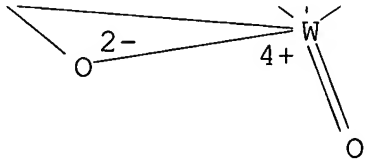
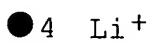




IT **84259-22-3P**
(formation of, from thermal decompn. of hexacosahydrate)

L37 ANSWER 17 OF 20 HCA COPYRIGHT 2006 ACS on STN

98:71485 An ether having a tertiary alkyl group. Murofushi, Toshiaki; Aoshima, Atsushi (Asahi Chemical Industry Co., Ltd., Japan). Eur. Pat. Appl. EP 57533 A1 **19820811**, 26 pp. DESIGNATED STATES: R: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE. (English). CODEN: EPXXDW. APPLICATION: EP 1982-300290 19820120. PRIORITY: JP 1981-8414 19810122.

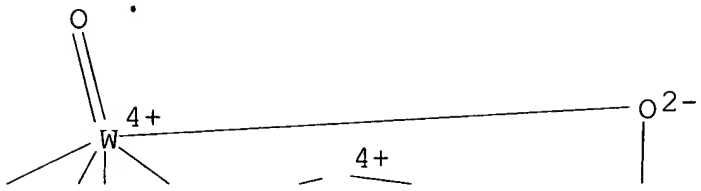
AB Ethers with tertiary alkyl groups were prepd. by treating a primary or secondary alc. with a tertiary olefin in a liq. hydrocarbon mixt. contg. an adduct of the starting alc. with a heteropoly acid or salt contg. .gtoreq.1 element selected from P, Si, B, Ge, As, Se, Ti, Zr, Mn, F, U, Ce or Th, at least Mo and/or W as a coordinating element, and .gtoreq.1 ammonium or metal cation. E.g., phosphotungstic acid was calcined in air at 300.degree., treated with MeOH, and the resulting catalyst used in the reaction of MeOH 2.8, Me2C:CH2 5.0, 1-butene 50, and butane 45 g at 60.degree. for 1 h to give 97.3% Me3COMe with 100% selectivity. Among the other heteropolyacid catalysts used were silicotungstic acid, 6-tungsto-6-molybdophosphoric acid, germanotungstic acid, Li silicotungstate, Ba phosphomolybdate, and Fe phosphotungstate.

IT **84259-22-3**
(catalysts, for etherification of methanol with isobutylene)

RN 84259-22-3 HCA

CN Tungstate(4-), [.mu.12-[orthosilicato(4-)-.kappa.O:.kappa.O:.kappa.O:.kappa.O':.kappa.O':.kappa.O':.kappa.O'':.kappa.O'':.kappa.O'':.kappa.O''':.kappa.O''':.kappa.O''']]tetracosa-.mu.-oxododecaoxododeca-, tetralithium (9CI) (CA INDEX NAME)

PAGE 1-A



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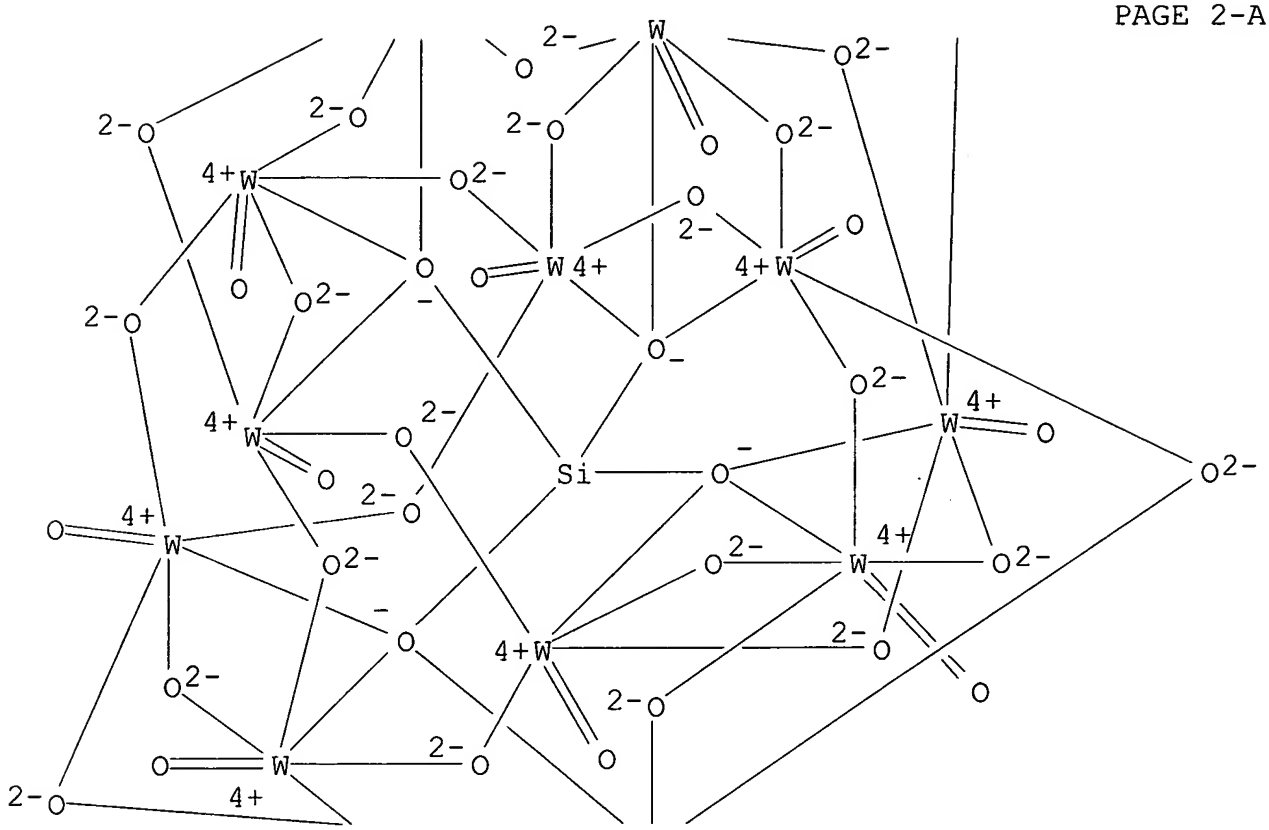

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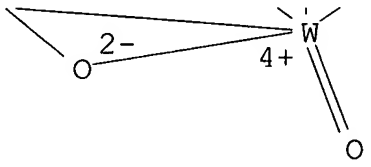


● 4 Li^+

IT **84259-22-3**
(catalysts, for etherification of methanol with isobutylene)

L37 ANSWER 18 OF 20 HCA COPYRIGHT 2006 ACS on STN
77:157604 Structure and dielectric properties of lithium-containing perovskites. Chan Van Thieu; Bader, V. I.; Krainik, N. N.;

Myl'nikova, I. E.; Tutov, A. G. (Inst. Poluprovodn., Leningrad, USSR). Izvestiya Akademii Nauk SSSR, Neorganicheskie Materialy, 8(9), 1631-3 (Russian) **1972**. CODEN: IVNMAW. ISSN: 0002-337X.

AB Single crystals of the compds. SrLi0.25Nb0.75O3 and SrLi0.25Ta0.75O3 were synthesized for the 1st time and their unit cell parameters were detd. Polycryst. solid solns. of the compn. Sr1-xPbxLi0.25Nb0.75O3 (0 .ltoreq. x .ltoreq. 1) were also synthesized. The given single crystals were grown by spontaneous crystn. from soln. in the melt. In the latter system solid solns. with perovskite-type structure could be prepd. only for the compns. with x = 0.2, 0.4, 0.6, and 0.8. From the results of dielec. investigations of the Sr1-xPbxLi0.25Nb0.75O3, solid solns., it is suggested that ferroelec.-type dipole ordering is present at x = 0.6 and 0.8.

IT **12600-46-3 12600-46-3D**, Lithium niobium silicate (LiNb3(SiO3)4), solid soln. with lead lithium niobium oxide (crystal and dielec. properties of)

RN 12600-46-3 HCA

CN Lithium niobium silicate (LiNb3(SiO3)4) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O3Si	4	15593-90-5
Nb	3	7440-03-1
Li	1	7439-93-2

RN 12600-46-3 HCA

CN Lithium niobium silicate (LiNb3(SiO3)4) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O3Si	4	15593-90-5
Nb	3	7440-03-1
Li	1	7439-93-2

IT **12600-46-3 12600-46-3D**, Lithium niobium silicate (LiNb3(SiO3)4), solid soln. with lead lithium niobium oxide (crystal and dielec. properties of)

L37 ANSWER 19 OF 20 HCA COPYRIGHT 2006 ACS on STN

59:7030 Original Reference No. 59:1257c-e Tetrasubstituted lithium salt of silicon-12-tungstic acid. Rode, E. Ya.; Krotov, N. A. Zhurnal Neorganicheskoi Khimii, 8, 939-49 (Unavailable) **1963**. CODEN: ZNOKAQ. ISSN: 0044-457X.

AB The tetrasubstituted Li salt of silicon-12-tungstic acid was prepd.

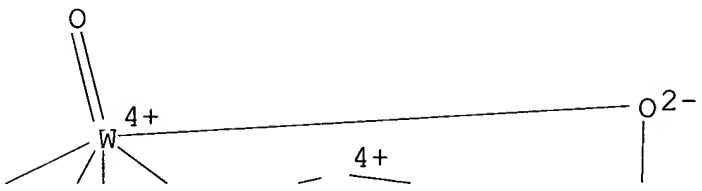
by adding Li2CO3 to a soln. of the silicotungstic acid and subjecting the mixt. to thermographic decompn. and tensimetric and x-ray analysis. Heating the sample, Li4[SiW12O40] .xH2O (x = 26), yields hydrates with x = 24, 14, 8, and 6. The removal of the last 6 mols. of H2O occurs continuously with the formation of a phase with a variable compn., x = 6-0. The anhyd. salt which is obtained at 320-25.degree. corresponds to the salt of the acid H4[SiW12O40] (CA 54, 24069b, 11673g). The salt is completely sol. in H2O and is stable to 480.degree.. At higher temp. it decomp. to form WO3, and the metasilicate and bitungstate of Li. All of the H2O is water of crystn. and the dehydration process is reversible and is not accompanied by the decompn. of the heteropoly compd. The nature of the bond for the H+ ions, which correspond to the last 2 mol. of H2O which are given off during the decompn. of the hydrates does not differ from that of the other H+ ions (Miolati and Pizzighelli, CA 2, 2346; Rosenheim and Schwer, CA 9, 570) which form the H2O mols. On the basis of x-ray data the formula for the hydrates is given as Li4[SiW12O40].xH2O. Salts with higher degrees of substitution were not found (Spitsyn and Kolli, CA 51, 8521f).

IT **84259-22-3**, Lithium tungstosilicate, Li4SiW12O40
(prepn. and dehydration of hydrates of)

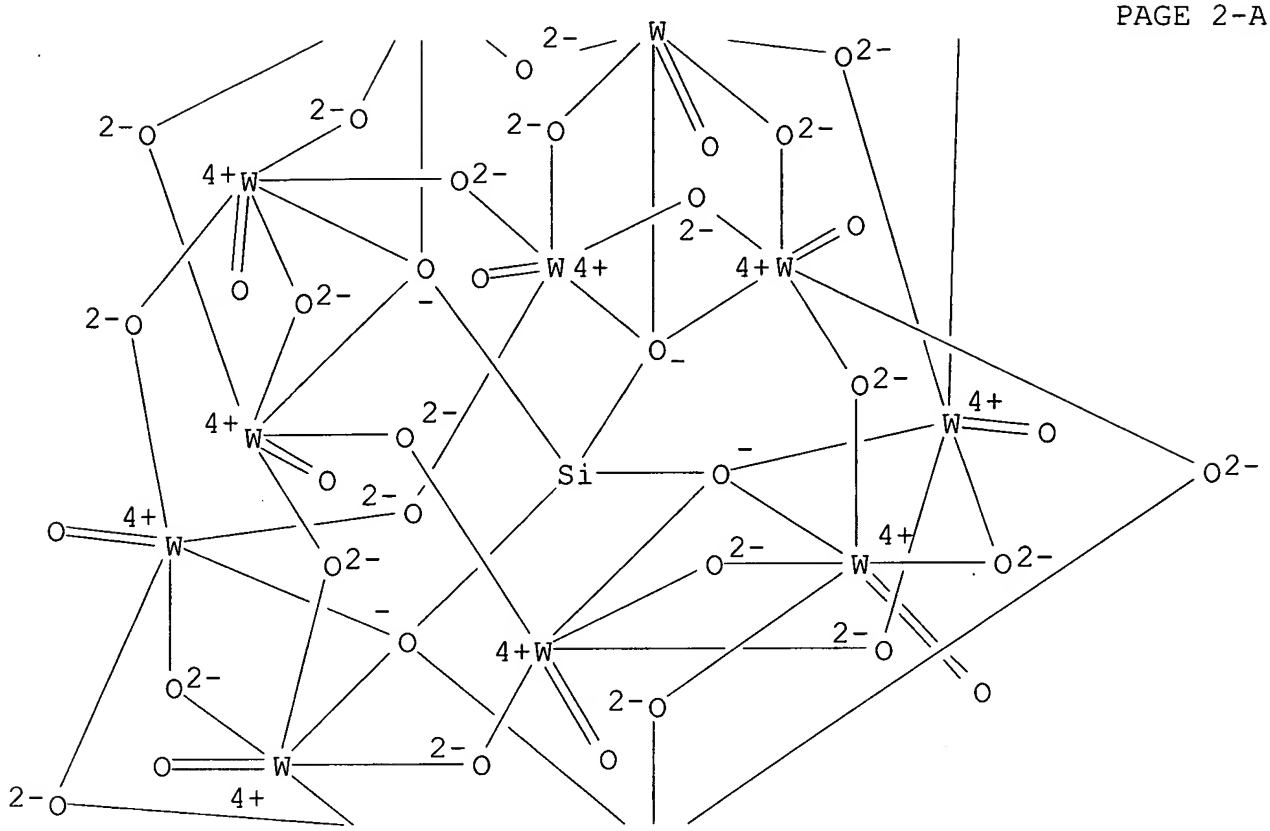
RN 84259-22-3 HCA

CN Tungstate(4-), [.mu.12-[orthosilicato(4-)-
.kappa.O:.kappa.O:.kappa.O:.kappa.O':.kappa.O':.kappa.O':.kappa.O'':
.kappa.O'':.kappa.O'':.kappa.O''':.kappa.O''':.kappa.O''']]tetracosa-
.mu.-oxododecaoxododeca-, tetralithium (9CI) (CA INDEX NAME)

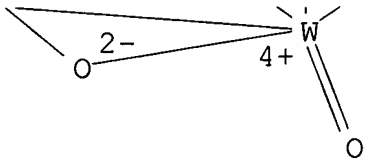
PAGE 1-A



PAGE 2-A



PAGE 3-A



● 4 Li^+

IT **84259-22-3**, Lithium tungstosilicate, $Li_4SiW_{12}O_{40}$
(prepn. and dehydration of hydrates of)

L37 ANSWER 20 OF 20 HCA COPYRIGHT 2006 ACS on STN
58:11794 Original Reference No. 58:1957c-d Influence of chemical additions on the reduction of tungsten oxides. Spier, H. L. (Tech.

Univ., Eindhoven, Neth.). Philips Res. Repts. Suppl., 3, 1-57 (Unavailable) **1962**.

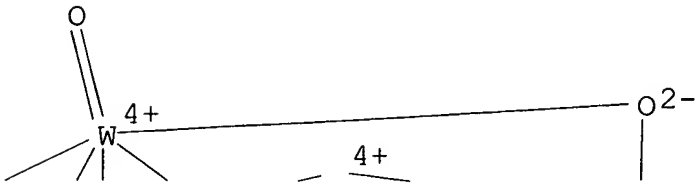
AB X-ray diffraction studies of the redn. of alkali tungstates (MxWO3) and alkali silicotungstates (M4SiW12O40) by H are described. The reason for using WO3 doped with Al2O3 and K2SiO3 in the manuf. of W filaments is the formation of much larger primary .alpha.-W crystals in the presence of K in the dope than in its absence.

IT **84259-22-3**, Lithium tungstosilicate, Li4SiW12O40
(crystal structure and redn. of)

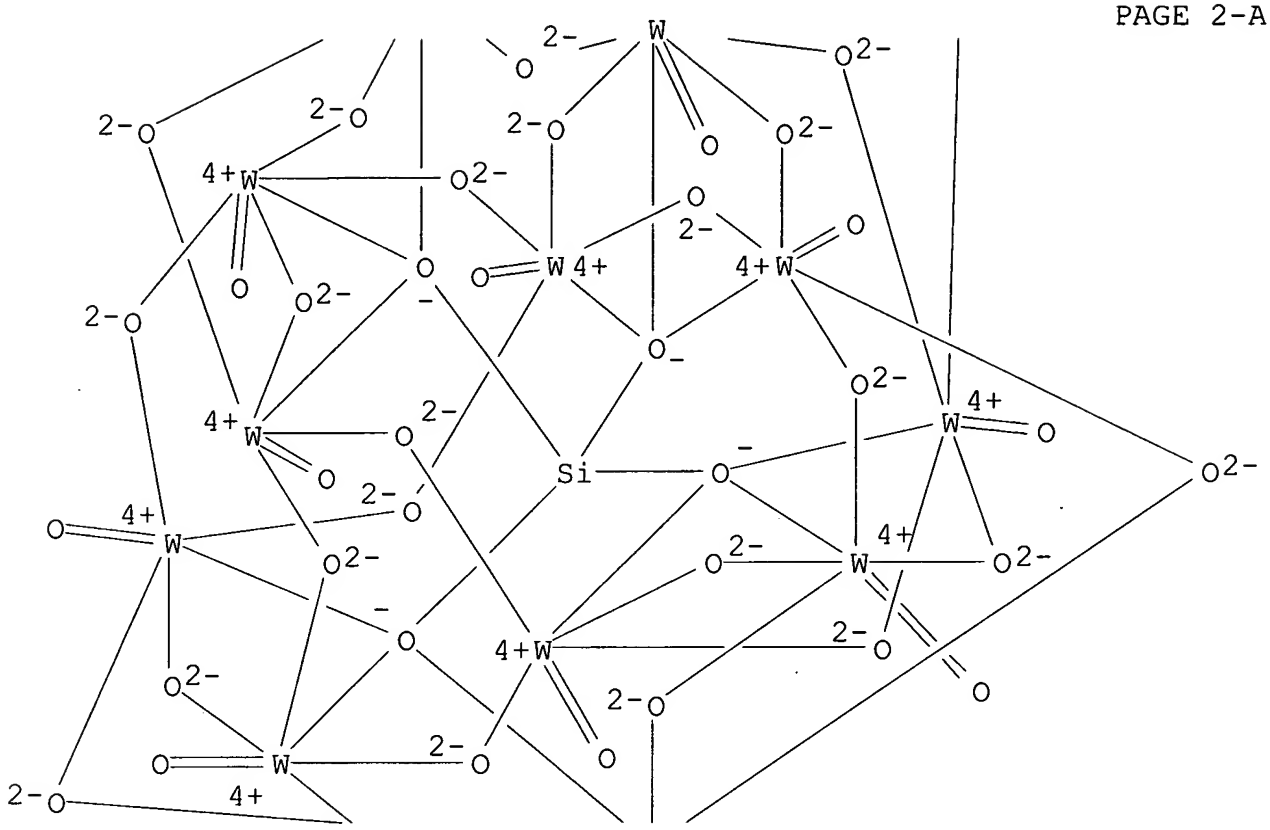
RN 84259-22-3 HCA

CN Tungstate(4-), [.mu.12-[orthosilicato(4-)-
.kappa.O:.kappa.O:.kappa.O:.kappa.O':.kappa.O':.kappa.O':.kappa.O'':
.kappa.O'':.kappa.O'':.kappa.O''':.kappa.O''':.kappa.O''']]tetracosa-
.mu.-oxododecaoxododeca-, tetralithium (9CI) (CA INDEX NAME)

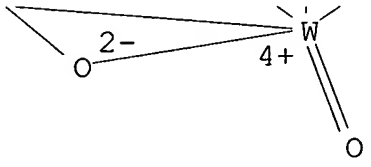
PAGE 1-A



PAGE 2-A



PAGE 3-A



● 4 Li^+

IT **84259-22-3**, Lithium tungstosilicate, $Li_4SiW_{12}O_{40}$
(crystal structure and redn. of)

=> d 138 1-20 cbib abs hitstr hitrn

L38 ANSWER 1 OF 20 HCA COPYRIGHT 2006 ACS on STN
139:389613 Perovskite-type semiconductor ceramic varistors with good solder crack resistance. Senda, Naoki; Matsuoka, Hiroshi; Hitomi, Atsushi; Ogasawara, Minoru (TDK Corporation, Japan). Jpn. Kokai Tokkyo Koho JP 2003335578 A2 20031125, 13 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2002-141573 20020516.

AB The varistors comprise (A) ceramics (satisfying prescribed mol ratio) contg. (a) oxides of Sr, Ba, Ca, and Ti, (b) oxides of .gtoreq.1 element chose from Y and lanthanoid or (c) oxides of .gtoreq.1 element chose from Nb and Ta, (d) **Si oxides**, and (e) oxides of .gtoreq.1 element chose from Li, Na, Mn, Cu, Zn, Sc, and In and (B) Cu or Cu-contg. material electrodes. The varistors show suppressed temp. dependency of varistor voltage at wide voltage range.

IT **625123-74-2P**
(perovskite-type semiconductor ceramic varistors with good solder crack resistance)

RN 625123-74-2 HCA
CN Barium calcium cobalt lithium niobium silicon strontium titanium oxide (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	x	17778-80-2
Ca	x	7440-70-2
Co	x	7440-48-4
Ba	x	7440-39-3
Ti	x	7440-32-6
Sr	x	7440-24-6
Si	x	7440-21-3
Nb	x	7440-03-1
Li	x	7439-93-2

IT **1314-61-0**, Tantalum oxide **12057-24-8**, **Lithium oxide (Li2O)**, uses
(perovskite-type semiconductor ceramic varistors with good solder crack resistance)

RN 1314-61-0 HCA
CN Tantalum oxide (Ta2O5) (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 12057-24-8 HCA
CN Lithium oxide (Li2O) (8CI, 9CI) (CA INDEX NAME)

Li—O—Li

IT **1313-96-8**, Niobium oxide (**Nb2O5**)

(semiconductor-forming agent; perovskite-type semiconductor ceramic varistors with good solder crack resistance)
RN 1313-96-8 HCA
CN Niobium oxide (Nb2O5) (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT **7631-86-9, Silica**, uses
(sintering aids; perovskite-type semiconductor ceramic varistors with good solder crack resistance)
RN 7631-86-9 HCA
CN Silica (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

O=Si=O

IT **625123-74-2P**
(perovskite-type semiconductor ceramic varistors with good solder crack resistance)
IT **1314-61-0**, Tantalum oxide **12057-24-8**, **Lithium oxide (Li2O)**, uses
(perovskite-type semiconductor ceramic varistors with good solder crack resistance)
IT **1313-96-8**, Niobium oxide (**Nb2O5**)
(semiconductor-forming agent; perovskite-type semiconductor ceramic varistors with good solder crack resistance)
IT **7631-86-9, Silica**, uses
(sintering aids; perovskite-type semiconductor ceramic varistors with good solder crack resistance)

L38 ANSWER 2 OF 20 HCA COPYRIGHT 2006 ACS on STN
137:40447 Low-temperature-fired barium titanate-based dielectric ceramic compositions with stable dielectric properties over wide frequencies. Ito, Junichi; Sato, Motohiko; Kasashima, Takashi; Otsuka, Atsushi; Obayashi, Kazushige (NGK Spark Plug Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2002173368 A2 **20020621**, 9 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2000-331431 20001030. PRIORITY: JP 2000-36223 20000215; JP 2000-293944 20000927.
AB The compns., useful for multilayer capacitors etc., comprise perovskite-type BaTiO3, are fired at .ltoreq.1150.degree., show dielec. const. (.epsilon., at 1 HMz) .gtoreq.1000, and contain alkali metals (and Nb, alk.-earth metals, Bi, Zn, Cu, Zr, Si, B, and/or Co) as subcomponents.
IT **436861-87-9P 436861-88-0P 436861-89-1P 436861-90-4P 436861-91-5P 436861-92-6P 436861-93-7P 436862-01-0P 436862-02-1P**
(low-temp.-sinterable barium titanate-based dielec. ceramic compns. with stable dielec. properties over wide frequencies)
RN 436861-87-9 HCA

CN Barium lithium niobium titanium zinc oxide silicate (Ba0.92Li0.09Nb0.02Ti0.92Zn0.01O2.87(SiO4)0.01) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	2.87	17778-80-2
O4Si	0.01	17181-37-2
Zn	0.01	7440-66-6
Ba	0.92	7440-39-3
Ti	0.92	7440-32-6
Nb	0.02	7440-03-1
Li	0.09	7439-93-2

RN 436861-88-0 HCA
CN Barium lithium niobium titanium zinc oxide silicate (Ba0.91Li0.09Nb0.02Ti0.91Zn0.01O2.82(SiO4)0.02) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	2.82	17778-80-2
O4Si	0.02	17181-37-2
Zn	0.01	7440-66-6
Ba	0.91	7440-39-3
Ti	0.91	7440-32-6
Nb	0.02	7440-03-1
Li	0.09	7439-93-2

RN 436861-89-1 HCA
CN Barium lithium niobium titanium zinc oxide silicate (Ba0.83Li0.08Nb0.02Ti0.83Zn0.01O2.4(SiO4)0.1) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	2.4	17778-80-2
O4Si	0.1	17181-37-2
Zn	0.01	7440-66-6
Ba	0.83	7440-39-3
Ti	0.83	7440-32-6
Nb	0.02	7440-03-1
Li	0.08	7439-93-2

RN 436861-90-4 HCA
CN Barium lithium niobium titanium zinc oxide silicate

(Ba0.78Li0.08Nb0.02Ti0.78Zn0.01O2.11(SiO4)0.16) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	2.11	17778-80-2
O4Si	0.16	17181-37-2
Zn	0.01	7440-66-6
Ba	0.78	7440-39-3
Ti	0.78	7440-32-6
Nb	0.02	7440-03-1
Li	0.08	7439-93-2

RN 436861-91-5 HCA
CN Barium lithium niobium titanium zinc borate oxide silicate (Ba0.86Li0.08Nb0.02Ti0.86Zn0.01(BO3)0.01O2.55(SiO4)0.07) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	2.55	17778-80-2
O4Si	0.07	17181-37-2
BO3	0.01	14213-97-9
Zn	0.01	7440-66-6
Ba	0.86	7440-39-3
Ti	0.86	7440-32-6
Nb	0.02	7440-03-1
Li	0.08	7439-93-2

RN 436861-92-6 HCA
CN Barium lithium niobium titanium zinc borate oxide silicate (Ba0.88Li0.09Nb0.02Ti0.88Zn0.01(BO3)0.03O2.64(SiO4)0.04) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	2.64	17778-80-2
O4Si	0.04	17181-37-2
BO3	0.03	14213-97-9
Zn	0.01	7440-66-6
Ba	0.88	7440-39-3
Ti	0.88	7440-32-6
Nb	0.02	7440-03-1
Li	0.09	7439-93-2

RN 436861-93-7 HCA
CN Barium lithium niobium titanium zinc borate oxide silicate (Ba0.86Li0.08Nb0.02Ti0.86Zn0.01(BO3)0.12O2.5(SiO4)0.01) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	2.5	17778-80-2
O4Si	0.01	17181-37-2
BO3	0.12	14213-97-9
Zn	0.01	7440-66-6
Ba	0.86	7440-39-3
Ti	0.86	7440-32-6
Nb	0.02	7440-03-1
Li	0.08	7439-93-2

RN 436862-01-0 HCA
CN Barium lithium niobium titanium zinc borate oxide silicate (Ba0.9Li0.12Nb0.02Ti0.9Zn0.01(BO3)0.03O2.76(SiO4)0.01) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	2.76	17778-80-2
O4Si	0.01	17181-37-2
BO3	0.03	14213-97-9
Zn	0.01	7440-66-6
Ba	0.9	7440-39-3
Ti	0.9	7440-32-6
Nb	0.02	7440-03-1
Li	0.12	7439-93-2

RN 436862-02-1 HCA
CN Barium lithium niobium titanium zinc borate oxide silicate (Ba0.85Li0.11Nb0.02Ti0.85Zn0.01(BO3)0.12O2.44(SiO4)0.02) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	2.44	17778-80-2
O4Si	0.02	17181-37-2
BO3	0.12	14213-97-9
Zn	0.01	7440-66-6
Ba	0.85	7440-39-3
Ti	0.85	7440-32-6

Nb	0.02	7440-03-1
Li	0.11	7439-93-2

IT **1313-96-8**, Niobium oxide (**Nb2O5**) **7631-86-9**
, **Silica**, uses **12057-24-8**, **Lithium oxide**, uses
(low-temp.-sinterable barium titanate-based dielec. ceramic compns. with stable dielec. properties over wide frequencies)
RN 1313-96-8 HCA
CN Niobium oxide (Nb2O5) (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 7631-86-9 HCA
CN Silica (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

O=Si=O

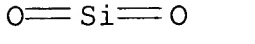
RN 12057-24-8 HCA
CN Lithium oxide (Li2O) (8CI, 9CI) (CA INDEX NAME)

Li—O—Li

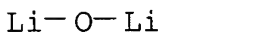
IT **436861-87-9P 436861-88-0P 436861-89-1P**
436861-90-4P 436861-91-5P 436861-92-6P
436861-93-7P 436862-01-0P 436862-02-1P
(low-temp.-sinterable barium titanate-based dielec. ceramic compns. with stable dielec. properties over wide frequencies)
IT **1313-96-8**, Niobium oxide (**Nb2O5**) **7631-86-9**
, **Silica**, uses **12057-24-8**, **Lithium oxide**, uses
(low-temp.-sinterable barium titanate-based dielec. ceramic compns. with stable dielec. properties over wide frequencies)

L38 ANSWER 3 OF 20 HCA COPYRIGHT 2006 ACS on STN
135:307485 Glass compositions with high Young's modulus and productivity. Nagata, Hideki; Yuki, Hiroshi; Mori, Toshiharu; Kawai, Hideki; Ishimaru, Kazuhiko (Minolta Camera Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2001287954 A2 **20011016**, 7 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2000-100842 20000403.
AB The compns. contain **SiO2** 40.5-44.5, Al2O3 5-30, MgO 10-30, TiO2 13.5-20, and preferably, **Li2O** 0.1-8%. The compns. are suitable for crystd. glass magnetic disk substrates.
IT **1313-96-8**, Niobium oxide (**Nb2O5**) **1314-61-0**
, Tantalum oxide(**Ta2O5**) **7631-86-9**,
Silica, processes **12057-24-8**, Lithia, processes
(glass ceramics contg.; glass compns. with high Young's modulus and productivity for crystd. glass magnetic disk substrates)

RN 1313-96-8 HCA
CN Niobium oxide (Nb2O5) (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 1314-61-0 HCA
CN Tantalum oxide (Ta2O5) (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 7631-86-9 HCA
CN Silica (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



RN 12057-24-8 HCA
CN Lithium oxide (Li2O) (8CI, 9CI) (CA INDEX NAME)



IT **366019-20-7P 366019-22-9P**
(glass ceramics contg.; glass compns. with high Young's modulus and productivity for crystd. glass magnetic disk substrates)
RN 366019-20-7 HCA
CN Aluminum lithium magnesium niobium silicon titanium oxide (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	x	17778-80-2
Ti	x	7440-32-6
Si	x	7440-21-3
Nb	x	7440-03-1
Mg	x	7439-95-4
Li	x	7439-93-2
Al	x	7429-90-5

RN 366019-22-9 HCA
CN Aluminum lithium magnesium silicon tantalum titanium oxide (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	x	17778-80-2
Ti	x	7440-32-6
Ta	x	7440-25-7
Si	x	7440-21-3
Mg	x	7439-95-4

Li		x	7439-93-2
Al		x	7429-90-5

IT **1313-96-8**, Niobium oxide (**Nb2O5**) **1314-61-0**
, Tantalum oxide(**Ta2O5**) **7631-86-9**,
Silica, processes **12057-24-8**, Lithia, processes
(glass ceramics contg.; glass compns. with high Young's modulus and productivity for crystd. glass magnetic disk substrates)
IT **366019-20-7P 366019-22-9P**
(glass ceramics contg.; glass compns. with high Young's modulus and productivity for crystd. glass magnetic disk substrates)

L38 ANSWER 4 OF 20 HCA COPYRIGHT 2006 ACS on STN
135:307484 Glass compositions with high Young's modulus and productivity. Nagata, Hideki; Yuki, Hiroshi; Mori, Toshiharu; Kawai, Hideki; Ishimaru, Kazuhiko (Minolta Camera Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2001287953 A2 **20011016**, 6 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2000-100841 20000403.
AB The compns. contain **SiO2** 42.5-44.5, Al2O3 5-30, MgO 10-30, TiO2 9.5-12, and preferably, **Li2O** 0.1-8%. The compns. are suitable for crystd. glass magnetic disk substrates.
IT **1313-96-8**, Niobium oxide (**Nb2O5**) **1314-61-0**
, Tantalum oxide(**Ta2O5**) **7631-86-9**,
Silica, processes **12057-24-8**, Lithia, processes
(glass ceramics contg.; glass compns. with high Young's modulus and productivity for crystd. glass magnetic disk substrates)
RN 1313-96-8 HCA
CN Niobium oxide (Nb2O5) (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 1314-61-0 HCA
CN Tantalum oxide (Ta2O5) (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 7631-86-9 HCA
CN Silica (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

O=Si=O

RN 12057-24-8 HCA
CN Lithium oxide (Li2O) (8CI, 9CI) (CA INDEX NAME)

Li—O—Li

IT **366019-20-7P 366019-22-9P**
(glass ceramics contg.; glass compns. with high Young's modulus and productivity for crystd. glass magnetic disk substrates)
RN 366019-20-7 HCA

CN Aluminum lithium magnesium niobium silicon titanium oxide (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	x	17778-80-2
Ti	x	7440-32-6
Si	x	7440-21-3
Nb	x	7440-03-1
Mg	x	7439-95-4
Li	x	7439-93-2
Al	x	7429-90-5

RN 366019-22-9 HCA
CN Aluminum lithium magnesium silicon tantalum titanium oxide (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	x	17778-80-2
Ti	x	7440-32-6
Ta	x	7440-25-7
Si	x	7440-21-3
Mg	x	7439-95-4
Li	x	7439-93-2
Al	x	7429-90-5

IT **1313-96-8**, Niobium oxide (**Nb2O5**) **1314-61-0**
, Tantalum oxide(**Ta2O5**) **7631-86-9**,
Silica, processes **12057-24-8**, Lithia, processes
(glass ceramics contg.; glass compns. with high Young's modulus and productivity for crystd. glass magnetic disk substrates)
IT **366019-20-7P 366019-22-9P**
(glass ceramics contg.; glass compns. with high Young's modulus and productivity for crystd. glass magnetic disk substrates)

L38 ANSWER 5 OF 20 HCA COPYRIGHT 2006 ACS on STN
135:307483 Glass compositions with high Young's modulus and productivity. Nagata, Hideki; Yuki, Hiroshi; Mori, Toshiharu; Kawai, Hideki; Ishimaru, Kazuhiko (Minolta Camera Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2001287950 A2 **20011016**, 6 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2000-100838 20000403.
AB The compns. contain **SiO2** 35-50, Al2O3 5-30, MgO 26.5-30, TiO2 5-20, and preferably, **Li2O** 0.1-8%. The compns. are suitable for crystd. glass magnetic disk substrates.
IT **1313-96-8**, Niobium oxide (**Nb2O5**) **1314-61-0**

, Tantalum oxide(**Ta2O5**) **7631-86-9**,
Silica, processes **12057-24-8**, Lithia, processes
(glass ceramics contg.; glass compns. with high Young's modulus and productivity for crystd. glass magnetic disk substrates)

RN 1313-96-8 HCA
CN Niobium oxide (Nb2O5) (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 1314-61-0 HCA
CN Tantalum oxide (Ta2O5) (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 7631-86-9 HCA
CN Silica (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

O═Si═O

RN 12057-24-8 HCA
CN Lithium oxide (Li2O) (8CI, 9CI) (CA INDEX NAME)

Li—O—Li

IT **366784-30-7P 366784-31-8P**
(glass ceramics contg.; glass compns. with high Young's modulus and productivity for crystd. glass magnetic disk substrates)
RN 366784-30-7 HCA
CN Aluminum lithium magnesium niobium titanium oxide silicate (Al0.14Li0.08Mg0.42Nb0.01Ti0.09O0.13(SiO4)0.38) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	0.13	17778-80-2
O4Si	0.38	17181-37-2
Ti	0.09	7440-32-6
Nb	0.01	7440-03-1
Mg	0.42	7439-95-4
Li	0.08	7439-93-2
Al	0.14	7429-90-5

RN 366784-31-8 HCA
CN Aluminum lithium magnesium tantalum titanium oxide silicate (Al0.14Li0.08Mg0.42Ta0.01Ti0.09O0.12(SiO4)0.38) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number

O	0.12	17778-80-2
O4Si	0.38	17181-37-2
Ti	0.09	7440-32-6
Ta	0.01	7440-25-7
Mg	0.42	7439-95-4
Li	0.08	7439-93-2
Al	0.14	7429-90-5

IT **1313-96-8**, Niobium oxide (**Nb2O5**) **1314-61-0**
, Tantalum oxide(**Ta2O5**) **7631-86-9**,
Silica, processes **12057-24-8**, Lithia, processes
(glass ceramics contg.; glass compns. with high Young's modulus and productivity for crystd. glass magnetic disk substrates)
IT **366784-30-7P 366784-31-8P**
(glass ceramics contg.; glass compns. with high Young's modulus and productivity for crystd. glass magnetic disk substrates)

L38 ANSWER 6 OF 20 HCA COPYRIGHT 2006 ACS on STN
135:307463 Glass compositions with high Young's modulus and productivity. Nagata, Hideki; Yuki, Hiroshi; Mori, Toshiharu; Kawai, Hideki; Ishimaru, Kazuhiko (Minolta Camera Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2001287952 A2 **20011016**, 6 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2000-100840 20000403.
AB The compns. contain **SiO2** 40.5-44, Al2O3 5-30, MgO 10-30, TiO2 7-10, and preferably, **Li2O** 0.1-8%. The compns. are suitable for crystd. glass magnetic disk substrates.
IT **1313-96-8**, Niobium oxide (**Nb2O5**) **1314-61-0**
, Tantalum oxide(**Ta2O5**) **7631-86-9**,
Silica, processes **12057-24-8**, Lithia, processes
(glass ceramics contg.; glass compns. with high Young's modulus and productivity for crystd. glass magnetic disk substrates)
RN 1313-96-8 HCA
CN Niobium oxide (Nb2O5) (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 1314-61-0 HCA
CN Tantalum oxide (Ta2O5) (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 7631-86-9 HCA
CN Silica (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

O=Si=O

RN 12057-24-8 HCA
CN Lithium oxide (Li2O) (8CI, 9CI) (CA INDEX NAME)

Li—O—Li

IT **366790-12-7P 366790-13-8P**
(glass ceramics contg.; glass compns. with high Young's modulus and productivity for crystd. glass magnetic disk substrates)
RN 366790-12-7 HCA
CN Aluminum lithium magnesium niobium titanium oxide silicate (Al0.27Li0.08Mg0.32Nb0.01Ti0.08O0.09(SiO4)0.42) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	0.09	17778-80-2
O4Si	0.42	17181-37-2
Ti	0.08	7440-32-6
Nb	0.01	7440-03-1
Mg	0.32	7439-95-4
Li	0.08	7439-93-2
Al	0.27	7429-90-5

RN 366790-13-8 HCA
CN Aluminum lithium magnesium tantalum titanium oxide silicate (Al0.27Li0.08Mg0.32Ta0.01Ti0.08O0.08(SiO4)0.43) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	0.08	17778-80-2
O4Si	0.43	17181-37-2
Ti	0.08	7440-32-6
Ta	0.01	7440-25-7
Mg	0.32	7439-95-4
Li	0.08	7439-93-2
Al	0.27	7429-90-5

IT **1313-96-8**, Niobium oxide (**Nb2O5**) **1314-61-0**, Tantalum oxide(**Ta2O5**) **7631-86-9**, **Silica**, processes **12057-24-8**, Lithia, processes
(glass ceramics contg.; glass compns. with high Young's modulus and productivity for crystd. glass magnetic disk substrates)
IT **366790-12-7P 366790-13-8P**
(glass ceramics contg.; glass compns. with high Young's modulus and productivity for crystd. glass magnetic disk substrates)

L38 ANSWER 7 OF 20 HCA COPYRIGHT 2006 ACS on STN
135:307462 Glass compositions with high Young's modulus and productivity. Nagata, Hideki; Yuki, Hiroshi; Mori, Toshiharu; Kawai, Hideki; Ishimaru, Kazuhiko (Minolta Camera Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2001287951 A2 **20011016**, 6 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2000-100839 20000403.
AB The compns. contain **SiO2** 45.5-47.5, Al2O3 5-30, MgO 10-30, TiO2 5-20, and preferably, **Li2O** 0.1-8%. The compns. are suitable for crystd. glass magnetic disk substrates.
IT **1313-96-8**, Niobium oxide (**Nb2O5**) **1314-61-0**, Tantalum oxide(**Ta2O5**) **7631-86-9**, **Silica**, processes **12057-24-8**, Lithia, processes
(glass ceramics contg.; glass compns. with high Young's modulus and productivity for crystd. glass magnetic disk substrates)
RN 1313-96-8 HCA
CN Niobium oxide (Nb2O5) (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 1314-61-0 HCA
CN Tantalum oxide (Ta2O5) (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 7631-86-9 HCA
CN Silica (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

O=Si=O

RN 12057-24-8 HCA
CN Lithium oxide (Li2O) (8CI, 9CI) (CA INDEX NAME)

Li—O—Li

IT **366784-51-2P 366784-52-3P**
(glass ceramics contg.; glass compns. with high Young's modulus and productivity for crystd. glass magnetic disk substrates)
RN 366784-51-2 HCA
CN Aluminum lithium magnesium niobium titanium oxide silicate (Al0.3Li0.17Mg0.19Nb0.01Ti0.09O0.45(SiO3)0.48) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	0.45	17778-80-2
O3Si	0.48	15593-90-5
Ti	0.09	7440-32-6
Nb	0.01	7440-03-1
Mg	0.19	7439-95-4

Li	0.17	7439-93-2
Al	0.3	7429-90-5

RN 366784-52-3 HCA
CN Aluminum lithium magnesium tantalum titanium oxide silicate (Al0.33Li0.07Mg0.2Ta0.01Ti0.1O0.44(SiO3)0.5) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	0.44	17778-80-2
O3Si	0.5	15593-90-5
Ti	0.1	7440-32-6
Ta	0.01	7440-25-7
Mg	0.2	7439-95-4
Li	0.07	7439-93-2
Al	0.33	7429-90-5

IT **1313-96-8**, Niobium oxide (**Nb2O5**) **1314-61-0**, Tantalum oxide(**Ta2O5**) **7631-86-9**, **Silica**, processes **12057-24-8**, Lithia, processes
(glass ceramics contg.; glass compns. with high Young's modulus and productivity for crystd. glass magnetic disk substrates)
IT **366784-51-2P 366784-52-3P**
(glass ceramics contg.; glass compns. with high Young's modulus and productivity for crystd. glass magnetic disk substrates)

L38 ANSWER 8 OF 20 HCA COPYRIGHT 2006 ACS on STN
135:292753 Glass compositions with high Young's modulus and productivity. Nagata, Hideki; Yuki, Hiroshi; Mori, Toshiharu; Kawai, Hideki; Ishimaru, Kazuhiko (Minolta Camera Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2001287949 A2 **20011016**, 6 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2000-100837 20000403.
AB The compns. contain **SiO2** 45.5-48.5, Al2O3 5-30, MgO 21.5-30, TiO2 5-20, and preferably, **Li2O** 0.1-8%. The compns. are suitable for crystd. glass magnetic disk substrates.
IT **1313-96-8**, Niobium oxide (**Nb2O5**) **1314-61-0**, Tantalum oxide(**Ta2O5**) **7631-86-9**, **Silica**, processes **12057-24-8**, Lithia, processes
(glass ceramics contg.; glass compns. with high Young's modulus and productivity for crystd. glass magnetic disk substrates)
RN 1313-96-8 HCA
CN Niobium oxide (Nb2O5) (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 1314-61-0 HCA
CN Tantalum oxide (Ta2O5) (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 7631-86-9 HCA

CN Silica (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

O=Si=O

RN 12057-24-8 HCA
CN Lithium oxide (Li2O) (8CI, 9CI) (CA INDEX NAME)

Li—O—Li

IT **365400-20-0P 365400-21-1P**
(glass ceramics contg.; glass compns. with high Young's modulus and productivity for crystd. glass magnetic disk substrates)
RN 365400-20-0 HCA
CN Aluminum lithium magnesium niobium titanium oxide silicate (Al0.17Li0.1Mg0.37Nb0.01Ti0.09O0.07(SiO4)0.4) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	0.07	17778-80-2
O4Si	0.4	17181-37-2
Ti	0.09	7440-32-6
Nb	0.01	7440-03-1
Mg	0.37	7439-95-4
Li	0.1	7439-93-2
Al	0.17	7429-90-5

RN 365400-21-1 HCA
CN Aluminum lithium magnesium tantalum titanium oxide silicate (Al0.17Li0.1Mg0.37Ta0.01Ti0.09O0.06(SiO4)0.4) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	0.06	17778-80-2
O4Si	0.4	17181-37-2
Ti	0.09	7440-32-6
Ta	0.01	7440-25-7
Mg	0.37	7439-95-4
Li	0.1	7439-93-2
Al	0.17	7429-90-5

IT **1313-96-8**, Niobium oxide (**Nb2O5**) **1314-61-0**, Tantalum oxide(**Ta2O5**) **7631-86-9**, **Silica**, processes **12057-24-8**, Lithia, processes
(glass ceramics contg.; glass compns. with high Young's modulus

and productivity for crystd. glass magnetic disk substrates)

IT **365400-20-0P 365400-21-1P**
(glass ceramics contg.; glass compns. with high Young's modulus and productivity for crystd. glass magnetic disk substrates)

L38 ANSWER 9 OF 20 HCA COPYRIGHT 2006 ACS on STN

135:292752 Glass compositions with high Young's modulus and productivity. Nagata, Hideki; Yuki, Hiroshi; Mori, Toshiharu; Kawai, Hideki; Ishimaru, Kazuhiko (Minolta Camera Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2001287948 A2 **20011016**, 6 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2000-100835 20000403.

AB The compns. contain **SiO2** 43.5-48, Al2O3 5-30, MgO 20-22, TiO2 5-20, and preferably, **Li2O** 0.1-8%. The compns. are suitable for crystd. glass magnetic disk substrates.

IT **1313-96-8**, Niobium oxide (**Nb2O5**) **1314-61-0**, Tantalum oxide(**Ta2O5**) **7631-86-9**, **Silica**, processes **12057-24-8**, Lithia, processes
(glass ceramics contg.; glass compns. with high Young's modulus and productivity for crystd. glass magnetic disk substrates)

RN 1313-96-8 HCA
CN Niobium oxide (Nb2O5) (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 1314-61-0 HCA
CN Tantalum oxide (Ta2O5) (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 7631-86-9 HCA
CN Silica (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

O=Si=O

RN 12057-24-8 HCA
CN Lithium oxide (Li2O) (8CI, 9CI) (CA INDEX NAME)

Li—O—Li

IT **365400-52-8P 365400-53-9P**
(glass ceramics contg.; glass compns. with high Young's modulus and productivity for crystd. glass magnetic disk substrates)

RN 365400-52-8 HCA
CN Aluminum lithium magnesium niobium titanium oxide silicate (Al0.21Li0.06Mg0.33Nb0.01Ti0.09O0.42(SiO3)0.45) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number

O	0.42	17778-80-2
O3Si	0.45	15593-90-5
Ti	0.09	7440-32-6
Nb	0.01	7440-03-1
Mg	0.33	7439-95-4
Li	0.06	7439-93-2
Al	0.21	7429-90-5

RN 365400-53-9 HCA
CN Aluminum lithium magnesium tantalum titanium oxide silicate (Al0.18Li0.19Mg0.31Ta0.01Ti0.07O0.4(SiO3)0.43) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	0.4	17778-80-2
O3Si	0.43	15593-90-5
Ti	0.07	7440-32-6
Ta	0.01	7440-25-7
Mg	0.31	7439-95-4
Li	0.19	7439-93-2
Al	0.18	7429-90-5

IT **1313-96-8**, Niobium oxide (**Nb2O5**) **1314-61-0**
, Tantalum oxide(**Ta2O5**) **7631-86-9**,
Silica, processes **12057-24-8**, Lithia, processes
(glass ceramics contg.; glass compns. with high Young's modulus and productivity for crystd. glass magnetic disk substrates)
IT **365400-52-8P 365400-53-9P**
(glass ceramics contg.; glass compns. with high Young's modulus and productivity for crystd. glass magnetic disk substrates)

L38 ANSWER 10 OF 20 HCA COPYRIGHT 2006 ACS on STN
135:292751 Glass compositions with high Young's modulus and productivity. Nagata, Hideki; Yuki, Hiroshi; Mori, Toshiharu; Kawai, Hideki; Ishimaru, Kazuhiko (Minolta Camera Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2001287945 A2 **20011016**, 7 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2000-100832 20000403.
AB The compns. contain **SiO2** 45.5-49.5, Al2O3 20.5-23.5, MgO 10-30, TiO2 5-20, and preferably, **Li2O** 0.1-8%. The compns. are suitable for crystd. glass magnetic disk substrates.
IT **1313-96-8**, Niobium oxide (**Nb2O5**) **1314-61-0**
, Tantalum oxide(**Ta2O5**) **7631-86-9**,
Silica, processes **12057-24-8**, Lithia, processes
(glass ceramics contg.; glass compns. with high Young's modulus and productivity for crystd. glass magnetic disk substrates)
RN 1313-96-8 HCA

CN Niobium oxide (Nb2O5) (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 1314-61-0 HCA
CN Tantalum oxide (Ta2O5) (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 7631-86-9 HCA
CN Silica (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

O═Si═O

RN 12057-24-8 HCA
CN Lithium oxide (Li2O) (8CI, 9CI) (CA INDEX NAME)

Li—O—Li

IT **365432-38-8P 365432-39-9P**
(glass ceramics contg.; glass compns. with high Young's modulus and productivity for crystd. glass magnetic disk substrates)
RN 365432-38-8 HCA
CN Aluminum lithium magnesium niobium titanium oxide silicate (Al0.2Li0.14Mg0.29Nb0.01Ti0.08O0.38(SiO3)0.46) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	0.38	17778-80-2
O3Si	0.46	15593-90-5
Ti	0.08	7440-32-6
Nb	0.01	7440-03-1
Mg	0.29	7439-95-4
Li	0.14	7439-93-2
Al	0.2	7429-90-5

RN 365432-39-9 HCA
CN Aluminum lithium magnesium tantalum titanium oxide silicate (Al0.2Li0.14Mg0.29Ta0.01Ti0.08O0.38(SiO3)0.46) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	0.38	17778-80-2
O3Si	0.46	15593-90-5
Ti	0.08	7440-32-6
Ta	0.01	7440-25-7

Mg	0.29	7439-95-4
Li	0.14	7439-93-2
Al	0.2	7429-90-5

IT **1313-96-8**, Niobium oxide (**Nb2O5**) **1314-61-0**, Tantalum oxide(**Ta2O5**) **7631-86-9**, **Silica**, processes **12057-24-8**, Lithia, processes
(glass ceramics contg.; glass compns. with high Young's modulus and productivity for crystd. glass magnetic disk substrates)

IT **365432-38-8P 365432-39-9P**
(glass ceramics contg.; glass compns. with high Young's modulus and productivity for crystd. glass magnetic disk substrates)

L38 ANSWER 11 OF 20 HCA COPYRIGHT 2006 ACS on STN

135:292747 Glass compositions with high Young's modulus and productivity. Nagata, Hideki; Yuki, Hiroshi; Mori, Toshiharu; Kawai, Hideki; Ishimaru, Kazuhiko (Minolta Camera Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2001287947 A2 **20011016**, 7 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2000-100834 20000403.

AB The compns. contain **SiO2** 35-42.5, Al2O3 5-30, MgO 20-22, TiO2 5-20, and preferably, **Li2O** 0.1-8%. The compns. are suitable for crystd. glass magnetic disk substrates.

IT **1313-96-8**, Niobium oxide **1314-61-0**, Tantalum oxide **7631-86-9**, **Silica**, processes **12057-24-8**, Lithia, processes
(glass ceramics contg.; glass compns. with high Young's modulus and productivity for crystd. glass magnetic disk substrates)

RN 1313-96-8 HCA
CN Niobium oxide (Nb2O5) (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 1314-61-0 HCA
CN Tantalum oxide (Ta2O5) (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 7631-86-9 HCA
CN Silica (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

O=Si=O

RN 12057-24-8 HCA
CN Lithium oxide (Li2O) (8CI, 9CI) (CA INDEX NAME)

Li—O—Li

IT **365437-95-2P 365437-96-3P**
(glass ceramics contg.; glass compns. with high Young's modulus and productivity for crystd. glass magnetic disk substrates)

RN 365437-95-2 HCA
CN Aluminum lithium magnesium niobium titanium oxide silicate (Al0.19Li0.19Mg0.32Nb0.01Ti0.11O0.19(SiO4)0.38) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	0.19	17778-80-2
O4Si	0.38	17181-37-2
Ti	0.11	7440-32-6
Nb	0.01	7440-03-1
Mg	0.32	7439-95-4
Li	0.19	7439-93-2
Al	0.19	7429-90-5

RN 365437-96-3 HCA
CN Aluminum lithium magnesium tantalum titanium oxide silicate (Al0.19Li0.27Mg0.31Ta0.01Ti0.09O0.19(SiO4)0.37) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	0.19	17778-80-2
O4Si	0.37	17181-37-2
Ti	0.09	7440-32-6
Ta	0.01	7440-25-7
Mg	0.31	7439-95-4
Li	0.27	7439-93-2
Al	0.19	7429-90-5

IT **1313-96-8**, Niobium oxide **1314-61-0**, Tantalum oxide **7631-86-9**, **Silica**, processes **12057-24-8**, Lithia, processes
(glass ceramics contg.; glass compns. with high Young's modulus and productivity for crystd. glass magnetic disk substrates)
IT **365437-95-2P 365437-96-3P**
(glass ceramics contg.; glass compns. with high Young's modulus and productivity for crystd. glass magnetic disk substrates)

L38 ANSWER 12 OF 20 HCA COPYRIGHT 2006 ACS on STN
135:292746 Glass compositions with high Young's modulus and productivity. Nagata, Hideki; Yuki, Hiroshi; Mori, Toshiharu; Kawai, Hideki; Ishimaru, Kazuhiko (Minolta Camera Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2001287946 A2 **20011016**, 6 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2000-100833 20000403.
AB The compns. contain **SiO2** 40.5-44.5, Al2O3 5-30, MgO

16.5-19, TiO2 5-20, and preferably, **Li2O** 0.1-8%. The compns. are suitable for crystd. glass magnetic disk substrates.

IT **1313-96-8**, Niobium oxide **1314-61-0**, Tantalum oxide **7631-86-9**, **Silica**, processes **12057-24-8**, Lithia, processes
(glass ceramics contg.; glass compns. with high Young's modulus and productivity for crystd. glass magnetic disk substrates)

RN 1313-96-8 HCA
CN Niobium oxide (Nb2O5) (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 1314-61-0 HCA
CN Tantalum oxide (Ta2O5) (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 7631-86-9 HCA
CN Silica (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

O=Si=O

RN 12057-24-8 HCA
CN Lithium oxide (Li2O) (8CI, 9CI) (CA INDEX NAME)

Li—O—Li

IT **365437-68-9P 365437-69-0P**
(glass ceramics contg.; glass compns. with high Young's modulus and productivity for crystd. glass magnetic disk substrates)

RN 365437-68-9 HCA
CN Aluminum lithium magnesium niobium titanium oxide silicate (Al0.24Li0.2Mg0.28Nb0.01Ti0.08O0.1(SiO4)0.41) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	0.1	17778-80-2
O4Si	0.41	17181-37-2
Ti	0.08	7440-32-6
Nb	0.01	7440-03-1
Mg	0.28	7439-95-4
Li	0.2	7439-93-2
Al	0.24	7429-90-5

RN 365437-69-0 HCA
CN Aluminum lithium magnesium tantalum titanium oxide silicate (Al0.24Li0.2Mg0.28Ta0.01Ti0.08O0.09(SiO4)0.41) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	0.09	17778-80-2
O4Si	0.41	17181-37-2
Ti	0.08	7440-32-6
Ta	0.01	7440-25-7
Mg	0.28	7439-95-4
Li	0.2	7439-93-2
Al	0.24	7429-90-5

IT **1313-96-8**, Niobium oxide **1314-61-0**, Tantalum oxide **7631-86-9**, **Silica**, processes **12057-24-8**, Lithia, processes
(glass ceramics contg.; glass compns. with high Young's modulus and productivity for crystd. glass magnetic disk substrates)

IT **365437-68-9P 365437-69-0P**
(glass ceramics contg.; glass compns. with high Young's modulus and productivity for crystd. glass magnetic disk substrates)

L38 ANSWER 13 OF 20 HCA COPYRIGHT 2006 ACS on STN

134:299445 Formation of photonic structures in glasses through phase separation. Lipovskii, A. A.; Petrikov, V. D.; Melehin, V. G.; Tagantsev, D. K.; Tatarintsev, B. V. (St. Petersburg State Technical University, St. Petersburg, 195251, Russia). Solid State Communications, 117(12), 733-737 (English) **2001**. CODEN: SSCOA4. ISSN: 0038-1098. Publisher: Elsevier Science Ltd..

AB Uniformly size-distributed lithium niobate microspheres were formed in a vitreous matrix through a liq.-liq. phase sepn. of glass under heat treatment. The size of the crystallites varied from 4 to 90 .mu.m depending on the temp. and the duration of the anneal. The structures were studied by optical diffraction, microscopy as well as by Raman and X-ray techniques.

IT **334521-05-0**, Lithium niobate
(crystallite microspheres; formation of lithium niobate microsphere photonic structures in Li Nb germanosilicate glasses through phase sepn.)

RN 334521-05-0 HCA

CN Barium germanium lithium niobium sodium tantalum titanium zirconium oxide silicate (Ba0.01Ge0.05Li0.52Nb0.4Na0.06Ta0.1Ti0.07Zr0.01O1.17(SiO4)0.32) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	1.17	17778-80-2
O4Si	0.32	17181-37-2
Zr	0.01	7440-67-7

Ge	0.05	7440-56-4
Ba	0.01	7440-39-3
Ti	0.07	7440-32-6
Ta	0.1	7440-25-7
Na	0.06	7440-23-5
Nb	0.4	7440-03-1
Li	0.52	7439-93-2

IT **1313-96-8**, Niobium oxide (**Nb2O5**) **1314-61-0**
, Tantalum oxide (**Ta2O5**) **7631-86-9**,
Silica, processes **12057-24-8**, **Lithium oxide** (**Li2O**), processes
(glass, lithium niobium thallium germanosilicate; formation of lithium niobate microsphere photonic structures in Li Nb germanosilicate glasses through phase sepn.)

RN 1313-96-8 HCA
CN Niobium oxide (Nb2O5) (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 1314-61-0 HCA
CN Tantalum oxide (Ta2O5) (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 7631-86-9 HCA
CN Silica (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

O═Si═O

RN 12057-24-8 HCA
CN Lithium oxide (Li2O) (8CI, 9CI) (CA INDEX NAME)

Li—O—Li

IT **334521-05-0**, Lithium niobate
(crystallite microspheres; formation of lithium niobate microsphere photonic structures in Li Nb germanosilicate glasses through phase sepn.)

IT **1313-96-8**, Niobium oxide (**Nb2O5**) **1314-61-0**
, Tantalum oxide (**Ta2O5**) **7631-86-9**,
Silica, processes **12057-24-8**, **Lithium oxide** (**Li2O**), processes
(glass, lithium niobium thallium germanosilicate; formation of lithium niobate microsphere photonic structures in Li Nb germanosilicate glasses through phase sepn.)

L38 ANSWER 14 OF 20 HCA COPYRIGHT 2006 ACS on STN
134:289105 Dielectric ceramic compositions, electronic parts, and their manufacture. Fujii, Mari; Nakano, Sachie; Sato, Akira (TDK

Electronics Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2001097772 A2 **20010410**, 12 pp. (Japanese). CODEN: JKXXAF.
APPLICATION: JP 1999-280188 19990930.

AB The compns. principally contain dielec. oxides of compns. shown as [[Ba(1-x)Cax]O]A[Ti(1-y)Zry]BO2 (0.990 .ltoreq. A/B < 1.000, x = 0.01-0.25, y = 0.1-0.3) and also as subcomponents 0.001-5 mol% .gtoreq.1 oxides of Sr, Y, Gd, Tb, Dy, V, Mo, Zn, Cd, Ti, Sn, W, Mn, Si, and P or compds. yielding the oxides after firing. The process involves firing the subcomponents at 500-1000.degree., followed with mixing with the principal components. Preferably, the obtained powders are then mixed with **Li oxides** and/or compds. yielding **Li oxides** after firing. Pastes of the obtained powders are laminated alternately with pastes for internal electrodes then are fired to give elec. parts. While the compns. are fireable at .ltoreq.1200.degree. in nonoxidative environment, the compns. have high permittivity. The elec. parts such as chip capacitors have long service life.

IT **332347-52-1**
(dielec. ceramic compns. fireable at lower temp. in nonoxidative environment, their electronic parts with high permittivity, and their manuf.)

RN 332347-52-1 HCA

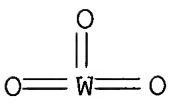
CN Barium calcium lithium manganese silicon titanium tungsten vanadium yttrium zirconium oxide (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	x	17778-80-2
Ca	x	7440-70-2
Zr	x	7440-67-7
Y	x	7440-65-5
V	x	7440-62-2
Ba	x	7440-39-3
W	x	7440-33-7
Ti	x	7440-32-6
Si	x	7440-21-3
Mn	x	7439-96-5
Li	x	7439-93-2

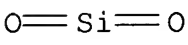
IT **1314-35-8**, Tungsten oxide, uses **7631-86-9**, **Silica**, uses
(subcomponents; dielec. ceramic compns. fireable at lower temp. in nonoxidative environment, their electronic parts with high permittivity, and their manuf.)

RN 1314-35-8 HCA

CN Tungsten oxide (WO3) (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



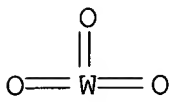
RN 7631-86-9 HCA
CN Silica (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



IT **332347-52-1**
(dielec. ceramic compns. fireable at lower temp. in nonoxidative environment, their electronic parts with high permittivity, and their manuf.)
IT **1314-35-8**, Tungsten oxide, uses **7631-86-9**, **Silica**, uses
(subcomponents; dielec. ceramic compns. fireable at lower temp. in nonoxidative environment, their electronic parts with high permittivity, and their manuf.)

L38 ANSWER 15 OF 20 HCA COPYRIGHT 2006 ACS on STN
132:272951 Perovskite-structured dielectric ceramic compositions and multilayered ceramic capacitors. Nakamura, Tomoyuki; Mizuno, Tsugunobu; Sano, Harunobu (Murata Mfg. Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2000103668 A2 **20000411**, 14 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1998-273049 19980928.
AB The compn. comprises a main component having compositional formula ABO3 + aR + bM (ABO3 indicates perovskite-structured Ba titanate-type solid soln; R = La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, and/or Lu; M = Mn, Ni, Mg, Fe, Al, Cr, and/or Zn; A/B = 0.950-1.050; 0.12 < a .ltoreq. 0.30; b = 0.04-0.30) and a sintering aid as a subcomponent. Optionally, the main component may also contain X(Zr,Hf)O3 (X = Ba, Sr, and/or Ca) and D (D = oxide of V, Nb, Ta, Mo, W, Y, and/or Sc). ABO3 may have compn. formula [(Ba1-x-ySrxCay)O]mTiO2 (x + y = 0-0.20; m = 0.950-1.050). Multilayered ceramic capacitors comprising the dielec. compns. are also claimed. The compns. have high insulation resistance under high elec. field and have low loss under high frequency and high a.c. voltage.
IT **1313-96-8**, Niobium oxide (**Nb2O5**) **1314-35-8**, Tungsten trioxide, properties **1314-61-0**, Tantalum oxide (**Ta2O5**)
(barium titanate-based perovskite-structured dielec. ceramic compns. and multilayered ceramic capacitors)
RN 1313-96-8 HCA
CN Niobium oxide (Nb2O5) (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 1314-35-8 HCA
CN Tungsten oxide (WO3) (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



RN 1314-61-0 HCA
CN Tantalum oxide (Ta2O5) (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT **263166-95-6P 263166-97-8P 263167-02-8P**
(barium titanate-based perovskite-structured dielec. ceramic compns. and multilayered ceramic capacitors)
RN 263166-95-6 HCA
CN Aluminum barium calcium erbium lithium manganese molybdenum nickel silicon strontium titanium tungsten oxide (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	x	17778-80-2
Ca	x	7440-70-2
Er	x	7440-52-0
Ba	x	7440-39-3
W	x	7440-33-7
Ti	x	7440-32-6
Sr	x	7440-24-6
Si	x	7440-21-3
Ni	x	7440-02-0
Mo	x	7439-98-7
Mn	x	7439-96-5
Li	x	7439-93-2
Al	x	7429-90-5

RN 263166-97-8 HCA
CN Aluminum barium calcium hafnium holmium lithium magnesium manganese neodymium silicon strontium tantalum titanium zirconium oxide (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	x	17778-80-2
Ca	x	7440-70-2
Zr	x	7440-67-7
Ho	x	7440-60-0
Hf	x	7440-58-6

Ba	x	7440-39-3
Ti	x	7440-32-6
Ta	x	7440-25-7
Sr	x	7440-24-6
Si	x	7440-21-3
Nd	x	7440-00-8
Mn	x	7439-96-5
Mg	x	7439-95-4
Li	x	7439-93-2
Al	x	7429-90-5

RN 263167-02-8 HCA
CN Barium boron calcium europium hafnium lithium magnesium molybdenum niobium silicon strontium titanium zirconium oxide (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	x	17778-80-2
Ca	x	7440-70-2
Zr	x	7440-67-7
Hf	x	7440-58-6
Eu	x	7440-53-1
B	x	7440-42-8
Ba	x	7440-39-3
Ti	x	7440-32-6
Sr	x	7440-24-6
Si	x	7440-21-3
Nb	x	7440-03-1
Mo	x	7439-98-7
Mg	x	7439-95-4
Li	x	7439-93-2

IT **7631-86-9**, **Silica**, properties **12057-24-8**
, **Lithium oxide** (**Li2O**), properties
(sintering aid; barium titanate-based perovskite-structured dielec. ceramic compns. and multilayered ceramic capacitors)
RN 7631-86-9 HCA
CN Silica (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

O=Si=O

RN 12057-24-8 HCA
CN Lithium oxide (Li2O) (8CI, 9CI) (CA INDEX NAME)

Li—O—Li

IT **1313-96-8**, Niobium oxide (**Nb2O5**) **1314-35-8**, Tungsten trioxide, properties **1314-61-0**, Tantalum oxide (**Ta2O5**)
(barium titanate-based perovskite-structured dielec. ceramic compns. and multilayered ceramic capacitors)
IT **263166-95-6P 263166-97-8P 263167-02-8P**
(barium titanate-based perovskite-structured dielec. ceramic compns. and multilayered ceramic capacitors)
IT **7631-86-9**, **Silica**, properties **12057-24-8**, **Lithium oxide** (**Li2O**), properties
(sintering aid; barium titanate-based perovskite-structured dielec. ceramic compns. and multilayered ceramic capacitors)

L38 ANSWER 16 OF 20 HCA COPYRIGHT 2006 ACS on STN
128:302950 Posistors with low specific resistivity and high voltage resistance at room temperature and their manufacture. Goto, Taiji; Hatano, Soko (Matsushita Electric Industrial Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 10092604 A2 **19980410** Heisei, 5 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1996-240288 19960911.
AB The posistors comprise main components of (Ba1-xCax)m(Ti1-yZry)O3 (x = 0.005-0.03; y = 0.01-0.035; m = 0.97-1.0) and additives of (i) rare-earth elements, Nb oxides, Sb oxides, and/or Bi oxides, (ii) **Si oxides** and Mn oxides, and (iii) compds. of Na, Li, and/or K. The posistors are manufd. by blending calcined powders contg. the main components, (i), and (ii) with the additive (iii), molding, and firing. In the manuf., the firing may be carried out in reducing atm. and thermally oxidizing.
IT **206195-03-1P**
(manuf. of posistors with low specific resistivity and high voltage resistance at room temp.)
RN 206195-03-1 HCA
CN Barium calcium lithium manganese niobium silicon titanium zirconium oxide (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	x	17778-80-2
Ca	x	7440-70-2
Zr	x	7440-67-7
Ba	x	7440-39-3
Ti	x	7440-32-6
Si	x	7440-21-3

Nb		x	7440-03-1
Mn		x	7439-96-5
Li		x	7439-93-2

IT **7631-86-9, Silica**, uses **12057-24-8**,
Lithia, uses
(manuf. of posistors with low specific resistivity and high voltage resistance at room temp.)
RN 7631-86-9 HCA
CN Silica (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

O=Si=O

RN 12057-24-8 HCA
CN Lithium oxide (Li2O) (8CI, 9CI) (CA INDEX NAME)

Li—O—Li

IT **1313-96-8**, Niobium oxide
(semiconducting elements; manuf. of posistors with low specific resistivity and high voltage resistance at room temp.)
RN 1313-96-8 HCA
CN Niobium oxide (Nb2O5) (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT **206195-03-1P**
(manuf. of posistors with low specific resistivity and high voltage resistance at room temp.)
IT **7631-86-9, Silica**, uses **12057-24-8**,
Lithia, uses
(manuf. of posistors with low specific resistivity and high voltage resistance at room temp.)
IT **1313-96-8**, Niobium oxide
(semiconducting elements; manuf. of posistors with low specific resistivity and high voltage resistance at room temp.)

L38 ANSWER 17 OF 20 HCA COPYRIGHT 2006 ACS on STN
122:94602 Dielectric ceramic composition and composite electronic parts. Takatani, Minoru; Kawada, Tomoaki; Sasaki, Masami (TDK Electronics Co., Ltd,, Japan; TDK Corp.). Jpn. Kokai Tokkyo Koho JP 06243725 A2 **19940902** Heisei, 8 pp. (Japanese). CODEN: JKXXAF.
APPLICATION: JP 1993-52910 19930218.
AB The ceramic compn. comprises 100 parts (Sr1-xCax)TiO3 (0 .ltoreq. x .ltoreq. 0.50; 1.00 .ltoreq. (Sr1-xCax)/Ti .ltoreq. 1.07) and addnl. CuO 0.1-5.0, glass 3-15, and **Li2O**-Al2O3-**SiO2** ceramic compn. 1-15 parts. The compn. may contain .ltoreq.10 parts MnO and .ltoreq.5 parts **Nb2O5** to 100 parts of

(Sr1-xCax)TiO3. The electronic parts consist of the ceramic compn. and a magnetic material.

IT **160407-38-5**
((Sr1-xCax)TiO3 dielec. ceramic compn. for laminated chip capacitors)

RN 160407-38-5 HCA
CN Aluminum boron calcium copper lithium manganese niobium silicon strontium titanium zinc oxide (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	x	17778-80-2
Ca	x	7440-70-2
Zn	x	7440-66-6
Cu	x	7440-50-8
B	x	7440-42-8
Ti	x	7440-32-6
Sr	x	7440-24-6
Si	x	7440-21-3
Nb	x	7440-03-1
Mn	x	7439-96-5
Li	x	7439-93-2
Al	x	7429-90-5

IT **1313-96-8**, Niobium oxide (**Nb2O5**) **7631-86-9**, **Silica**, uses **12057-24-8**, **Lithium oxide**, uses
((Sr1-xCax)TiO3 dielec. ceramic compn. for laminated chip capacitors)

RN 1313-96-8 HCA
CN Niobium oxide (Nb2O5) (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 7631-86-9 HCA
CN Silica (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

O=Si=O

RN 12057-24-8 HCA
CN Lithium oxide (Li2O) (8CI, 9CI) (CA INDEX NAME)

Li—O—Li

IT **160407-38-5**
((Sr1-xCax)TiO3 dielec. ceramic compn. for laminated chip capacitors)

IT **1313-96-8**, Niobium oxide (**Nb2O5**) **7631-86-9**
, **Silica**, uses **12057-24-8**, **Lithium oxide**, uses
((Sr1-xCax)TiO3 dielec. ceramic compn. for laminated chip capacitors)

L38 ANSWER 18 OF 20 HCA COPYRIGHT 2006 ACS on STN
121:146964 Composition for semiconductive ceramic capacitor and its preparation. Ishiguro, Takero; Harada, Yoshiji (Jgc Corp, Japan). Jpn. Kokai Tokkyo Koho JP 06077085 A2 **19940318** Heisei, 6 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1992-200023 19920727.

AB An oxide (A) of compn. **Li2O**:Bi2O3 = 30-70:30-70 (mol. ratio) is allowed to be thermally diffused into a ceramic contg. a main material of an oxide (B) from 100 mol Ti, 70-80 mol Sr, and 20-30 mol Ca; and additives (C) contg. 0.1-0.4 mol **Nb2O5**, 0.015-0.05 mol Mn3O4, 0.1-0.3 mol CuO, 0.05-0.2 mol B2O3, and 0.5-2.0 mol **SiO2** to give the title compn. The prepn. involves the following steps; (1) adding the additives C to a mixt. from 100 mol Ti oxide, 70-80 mol Sr oxide or -carbonate, and 20-30 mol Ca oxide or -carbonate; (2) calcinating the powder mixt. at 1,000-1,100.degree., pulverizing, forming, and sintering at 1,350-1,450.degree. in H-contg. reducing atm.; and (3) allowing A to be thermally diffused into the sintered product at 1,150-1,280.degree.. The capacitor has high breakdown voltage and dielec. const.

IT **157270-15-0**
(semiconductive ceramic capacitors)

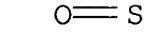
RN 157270-15-0 HCA

CN Bismuth boron calcium copper lithium manganese niobium silicon strontium titanium oxide (9CI) (CA INDEX NAME)

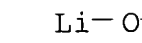
Component	Ratio	Component Registry Number
O	x	17778-80-2
Ca	x	7440-70-2
Bi	x	7440-69-9
Cu	x	7440-50-8
B	x	7440-42-8
Ti	x	7440-32-6
Sr	x	7440-24-6
Si	x	7440-21-3
Nb	x	7440-03-1
Mn	x	7439-96-5
Li	x	7439-93-2

IT **7631-86-9**, **Silicon oxide**, uses

12059-63-1, Niobium oxide (Nb2O3)
(semiconductive ceramic capacitors prepd. from, calcium strontium titanium oxide)
RN 7631-86-9 HCA
CN Silica (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



RN 12059-63-1 HCA
CN Niobium oxide (Nb2O3) (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT **12057-24-8**, **Lithium oxide**, uses
(thermally diffusion of oxides contg., in manuf. of calcium strontium titanium oxide semiconductive ceramic capacitors)
RN 12057-24-8 HCA
CN Lithium oxide (Li2O) (8CI, 9CI) (CA INDEX NAME)



IT **157270-15-0**
(semiconductive ceramic capacitors)
IT **7631-86-9**, **Silicon oxide**, uses
12059-63-1, Niobium oxide (Nb2O3)
(semiconductive ceramic capacitors prepd. from, calcium strontium titanium oxide)
IT **12057-24-8**, **Lithium oxide**, uses
(thermally diffusion of oxides contg., in manuf. of calcium strontium titanium oxide semiconductive ceramic capacitors)

L38 ANSWER 19 OF 20 HCA COPYRIGHT 2006 ACS on STN
120:198238 Interfacial structure and interfacial reaction of carbon fiber/lithium aluminosilicate glass-ceramic composites. Wang, Xiaoguang; Zhou, Ao; Wu, Tie; Wang, Huijuan; Zhou, Mengpei; Zou, Xiaoxing (Glass Res. Inst., China Build. Mater. Acad., Beijing, 100024, Peop. Rep. China). Guisuanyan Xuebao, 20(5), 449-56 (Chinese) **1992**. CODEN: KSYHA5. ISSN: 0454-5648.
AB Both the interface and the fiber surface in C fiber-reinforced Li aluminosilicate glass-ceramic (LASI and LASII) composites hot-pressed at different temps. (1240 and 1360.degree.) and for different times (30 and 60 min) and with different strengths and toughnesses were studied using TEM, energy-dispersive x-ray anal., selected-area diffraction, SEM, and XPS. LASI had compn. **SiO2** 61.7, Al2O3 17.5, **Li2O** 10.3, and B2O3 10.5 wt.%, and LASII had compn. **SiO2** 65.9, Al2O3 22.1, **Li2O** 3.5, MgO 3.5, **Nb2O5** 3, and ZrO2 2 wt.%. Hot pressing for the shorter time made the interfacial layer in the C

fiber-reinforced LASI composite thin and relatively compact, while hot pressing for the longer time made the interfacial layer wide and loose. A wide gas diffusion layer and NbC grains existed at the C fiber-LASII interface. When the C fiber-reinforced LASII was hot-pressed for the longer time, the diffusion layer was thin, and NbC deposited on the fiber surface, the binding between the C fiber and the LAS matrix improved. The interfacial reaction, interfacial structure formation, and their effect on composite properties are discussed.

IT **153850-55-6**
(glass-ceramics, composites with carbon fiber, interfacial structure and reaction of)

RN 153850-55-6 HCA

CN Aluminum lithium magnesium niobium zirconium oxide silicate (Al0.28Li0.15Mg0.06Nb0.01Zr0.01O0.26(Si2O5)0.35) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O5Si2	0.35	20328-07-8
O	0.26	17778-80-2
Zr	0.01	7440-67-7
Nb	0.01	7440-03-1
Mg	0.06	7439-95-4
Li	0.15	7439-93-2
Al	0.28	7429-90-5

IT **153850-55-6**
(glass-ceramics, composites with carbon fiber, interfacial structure and reaction of)

L38 ANSWER 20 OF 20 HCA COPYRIGHT 2006 ACS on STN

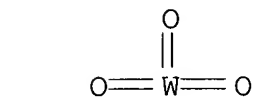
115:124885 Voltage-dependent nonlinear resistor ceramic compositions and manufacture of varistors. Noi, Keiichi (Matsushita Electric Industrial Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 03008760 A2 **19910116** Heisei, 5 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1989-143722 19890606.

AB The title ceramic compns. comprise a 100-wt. part main component from Sr1-xCaxTiO3 (0.001 .ltoreq. x .ltoreq. 0.300) 90,000-99,998; .gtoreq.1 oxide(s) from **Nb2O5**, **Ta2O5**, **WO3**, Dy2O5, Y2O3, La2O3, CeO2, Sn2O3, Pr6O11, and Nd2O3 0.001-5.000; and .gtoreq.1 oxide(s) from Al2O3, Sb2O3, BaO, BeO, PbO, B2O3, Cr2O3, Fe2O3, CdO, K2O, CaO, Co2O3, CuO, Cu2O, **Li2O**, LiF, MgO, MnO2, MoO3, Na2O, NaF, NiO, Rh2O3, SeO2, Ag2O, **SiO2**, SiC, SrO, Tl2O3, ThO2, TiO2, V2O5, Bi2O3, ZnO, ZrO2, and SnO2 0.001-5.000 mol%, and an 0.001-10,000-wt. part additive which is a sintered (at .gtoreq.1200.degree.) mixt. of

60,000-32.500, and **SiO2** 40,000-67,500 mol %. Varistors are manuf. by sintering the ceramic compns. at .gtoreq.1100.degree.. The varistors have low voltage and large dielec const.

IT **1313-96-8**, Niobium oxide (**Nb2O5**) **1314-35-8**, Tungsten oxide (**WO3**), uses and miscellaneous
1314-61-0, Tantalum oxide (**Ta2O5**)
12036-40-7, Tantalum oxide (Ta2O3) **12057-24-8**, **Lithium oxide** (**Li2O**), uses and miscellaneous
(ceramic compns. based on, nonlinearly voltage-dependent, for varistor manuf.)

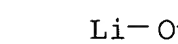
RN 1313-96-8 HCA
CN Niobium oxide (Nb2O5) (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 1314-35-8 HCA
CN Tungsten oxide (WO3) (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



RN 1314-61-0 HCA
CN Tantalum oxide (Ta2O5) (8CI, 9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 12036-40-7 HCA
CN Tantalum oxide (Ta2O3) (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	3	17778-80-2
Ta	2	7440-25-7

RN 12057-24-8 HCA
CN Lithium oxide (Li2O) (8CI, 9CI) (CA INDEX NAME)



IT **135988-87-3**
(nonlinearly voltage-dependent resistor ceramic compn., for varistor manuf.)

RN 135988-87-3 HCA
CN Barium calcium lithium niobium strontium titanium oxide silicate (Ba0.03Ca0.08Li0.01Nb0.01Sr0.91Ti1.02O3(SiO4)0.04) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	3	17778-80-2
O4Si	0.04	17181-37-2
Ca	0.08	7440-70-2
Ba	0.03	7440-39-3
Ti	1.02	7440-32-6
Sr	0.91	7440-24-6
Nb	0.01	7440-03-1
Li	0.01	7439-93-2

IT **1313-96-8**, Niobium oxide (**Nb2O5**) **1314-35-8**, Tungsten oxide (**WO3**), uses and miscellaneous
1314-61-0, Tantalum oxide (**Ta2O5**)
12036-40-7, Tantalum oxide (Ta2O3) **12057-24-8**, **Lithium oxide** (**Li2O**), uses and miscellaneous
(ceramic compns. based on, nonlinearly voltage-dependent, for varistor manuf.)

IT **135988-87-3**
(nonlinearly voltage-dependent resistor ceramic compn., for varistor manuf.)